12

EDGEWOOD
RESEARCH,
DEVELOPMENT &
ENGINEERING
CENTER

ERDEC-SP-005

SELECTION OF BEST REORGANIZATIONAL ARRANGEMENT FOR THE RESEARCH AND TECHNOLOGY DIRECTORATE USING THE EXPERT CHOICE DECISION PROGRAM

John H. Heitz

BUSINESS MANAGEMENT DIRECTORATE

Miles C. Miller

RESEARCH AND TECHNOLOGY DIRECTORATE

May 1993

U.S. ARMY
CHEMICAL
AND BIOLOGICAL
DEFENSE AGENCY

Aberdeen Proving Ground, Maryland 21010-5423

Disclaimer

The findings in this report are not to be construed as an official Department of the Army position unless so designated by other authorizing documents.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No 0704-0188

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	1993 May	Final, 93 Jan - 93 Feb

4. TITLE AND SUBTITLE
Selection of Best Reorganizational Arrangement for the Research and Technology Directorate Using the Expert Choice Decision Program

5. FUNDING NUMBERS
NONE

6. AUTHOR(S)
Heitz, John E. (CBDA), and Miller, Miles C. (ERDEC)

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
CDR, CBDA, ATTN: AMSCB-RR, APG, MD 21010-5423

DIR, ERDEC, ATTN: SCBRD-RTM, APG, MD 21010-5423

8. PERFORMING ORGANIZATION REPORT NUMBER
ERDEC-SP-005

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

This report describes the use of the Expert Choice (EC) Decision Program to compare and select the reorganizational arrangement for the Research and Technology Directorate, ERDEC, which best satisfies the objectives, requirements, and constraints specified by the ERDEC management. The analysis specifies the relative rank of the organizational options considered, provides an insight into the reasons for the results, provides an understanding of the sensitivity of the results to the importance assigned to the criteria, and documents the entire process. The analysis also acts to illustrate the general process involved in the EC program.

14. SUBJECT TERMS
Expert Choice
Ranking methodology
Decision analysis

15. NUMBER OF PAGES
89

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UL

Blank

PREFACE

The recent U.S. Army Edgewood Research, Development and Engineering Center reorganization will significantly improve the productivity, responsiveness to the customer, and morale of the center in performing its research and development activities. However, as described in this report, the full potential of these changes may not be realized until existing Government civilian personnel regulations are altered. This work was performed during the period 14 January 1993 to 26 February 1993 under Research and Technology Directorate overhead funds.

The use of trade names or manufacturers' names in this report does not constitute an official endorsement of any commercial products. This report may not be cited for purposes of advertisement.

This report has been approved for release to the public.

Blank

CONTENTS

LIST OF FIGURES

SELECTION OF BEST REORGANIZATIONAL ARRANGEMENT FOR THE RESEARCH AND TECHNOLOGY DIRECTORATE USING THE EXPERT CHOICE DECISION PROGRAM

I. INTRODUCTION

This report describes the use of the Expert Choice (EC) Decision Program to compare and select the reorganizational arrangement for the Research and Technology Directorate which best satisfies the objectives, requirements, and constraints specified by the U.S. Army Edgewood Research, Development and Engineering Center (ERDEC) management. The analysis specifies the relative rank of the organizational options considered, provides an insight into the reasons for the results, provides an understanding of the sensitivity of the results to the importance assigned to the criteria, and documents the entire process. The analysis also acts to illustrate the general process involved in the EC program.

II. BACKGROUND

During the summer/fall of 1992, the ERDEC Research and Technology Directorate considered various organizational arrangements to meet the overall ERDEC reorganizational goals. Initially, an empowered team arrangement was considered with office chiefs providing technical oversight over designated teams within the office's technical areas. This was judged unacceptable because it retained too much of the old style, line element hierarchy, and it was desired, at that time, that the office chiefs not be supervisors. A considerable effort was then spent on formulating an organizational approach having the technical planning done by a directorate corporate board, composed of high grade office chiefs and the programs executed by empowered teams under the supervision of functional departments which would primarily handle personnel and facilities matters. While this approach appeared to offer the maximum empowerment, it was deemed unacceptable to the Civilian Personnel Office (CPO) because of conflicts with existing supervisory and grade regulations. Finally, the office/team line approach was modified to include functional teams under the supervision of functional offices with empowered product teams reporting to the director. Thus, the process had essentially gone full circle without a definite approach being clearly apparent.

Accordingly, the EC, Decision Making Program, recently acquired by the center, was utilized to evaluate the various organizational approaches and to determine the organizational arrangement which best met all of the desired organizational requirements. On 14 January 1993, John Heitz, Management Support Office and Miles Miller, Research and Technology Directorate, performed the subject analysis. Mr. Miller was aware of the Research and Technology Directorate reorganizational situation and Mr. Heitz was experienced in the general area of

organizational management. Both individuals had a working knowledge of the EC Program. The following analysis is based on the consensus of these individuals.

III. EXPERT CHOICE

The EC Program is a Decision-Making Support computer program based on the use of the Analytic Hierarchy Process (AHP). The best decision for various alternatives is determined by considering the criteria and requirements established by the decision maker and the decision makers's inputs regarding the relative importance and preferences involved (ref 1). The final analysis indicates the "best choice" among the alternatives considered as well as the relative ranking of all the alternatives. The program is especially valuable for making decisions when there are a large number of conflicting criteria and requirements. In addition, the process provides a detailed insight into why the final results occurred and documents the decision making procedure. It also evaluates the sensitivity of the decision on the relative importance assigned to the various criteria and requirements used in analysis.

IV. GOAL

The goal of this analysis was "to select a reorganizational arrangement" for the Research and Technology Directorate that best satisfies the criteria (i.e., objectives, requirements, and constraints) considered.

V. CRITERIA

The criteria (objectives, requirements, constraints, etc.) of the reorganization as set forth by Mr. Joseph Vervier, Director, Research and Technology Directorate, (ref 2) were distilled down to the following seven "Criteria." These are not presented in any order of importance.

1. Team Empowerment - Provide a maximum degree of "empowerment" to the teams. This involves providing them with as much flexibility and decision making power as possible without requiring them to obtain approvals from higher authority.

2. CPO Regulations - The organization arrangement must comply with existing Government CPO regulations.

3. Technical Integration - The arrangement must allow integration of technology between the various organizational elements. This includes interaction, mutual support, combined actions, etc. The intent is to eliminate any parochialism and invisible boundaries which would hinder or prevent mutually interactive activities between elements.

4. Maintaining Current Grades - It is desired to maintain, at least on a short term basis, the existing grades of the Research and Technology Directorate personnel, especially the GM grades.

5. Clear Understanding of Duties and Responsibilities - The organizational arrangement must provide a clear understanding of the duties and responsibilities of every organizational element.

6. Flattened Organization - Reduction of the layers or tiers of management is desired in order to streamline the processes and reduce the costs associated with operating the organization.

7. Fast or Rapid Implementation - Because of the desire to establish the reorganization by mid-January 1993, it is desired to select an arrangement which can be implemented rapidly (i.e., almost immediately). There is not much time to "work out" the details of how the arrangement will function on a day-to-day basis.

VI. ALTERNATIVE ORGANIZATIONAL ARRANGEMENTS

A total of five alternative organizational arrangements or options were considered as defined in Figure 1. All of these arrangements only considered the major organizational elements from the director to the teams. The numbers and titles of the organizational elements involved were not considered. However, the grade levels of the various management tiers were indicated. Also, while the lower level elements were termed "teams" and the next higher lever termed either "divisions" or offices, these could have different names in the final organization.

Option 1: This option is essentially the same as the previous organizational arrangement at the U.S. Army Chemical Research, Development and Engineering Center (CRDEC), except that the divisions and branches are changed to divisions and teams, respectively.

Team empowerment would depend on the manner in which the division chiefs manage their teams. The division chiefs would supervise their team leaders and the team leaders would supervise their team members. This would meet all existing CPO regulations. Both division chiefs and team leaders would be GM supervisors. This arrangement would have the usual problem with technical integration because of the narrow, parochial characteristics of this organizational arrangement. This should provide sufficient high grade positions to absorb all of the existing high grades. The duties and responsibilities could be the same as the previous organization or could be modified, but the duties and responsibilities are pretty clear cut because of past experience and the rigid hierarchy represented by this arrangement. This latter factor would mean that this arrangement could be implemented immediately. The organization is not flattened

relative to that which existed with the previous CRDEC organization.

Option 2: This option is similar to Option 2, except that the team leaders are GS grades. This is the arrangement used previously at the BRL and currently at the ARL.

Here, the division chiefs are GMs and are the first line supervisors for all of the individuals in their divisions (i.e., team leaders and team members). The team leaders, while not GMs, would have certain supervisory duties such as approving time cards, providing input for performance appraisals, etc. Because of the reduction in GM positions under this arrangement, it would be more difficult to maintain the existing grade structure. However, it would tend to flatten the organization, in appearance, if not in fact. The difficulties with team empowerment and technical integration of Option 1 would still apply as would the advantages of clear duties and ability to implement quickly.

Option 3: This is the most unorthodox arrangement considered and was intended to represent the maximum realization of the "empowered team" concept. Here, all of the team leaders and team members are assigned to one of three large, functional departments. Each department is headed by a GM who serves as the first line supervisor for every individual in their department. A group of high grade individuals, each representing a fundamental technical area, form, along with other members of the director's staff, a "corporate board" which plans the objectives, scope, schedule, and funding level for the technical projects undertaken by Research and Technology Directorate. The implementation of these plans would be performed by empowered teams composed of a mix of individuals from the various departments, one of whom is designated as the team leader. These teams would report directly to the director. The team leader could be either a GM or GS depending on the size and importance of their team.

This arrangement would provide the maximum "team empowerment" and team integration. Because it would eliminate a layer of management over the current organization, it would certainly flatten the organization. It would also tend to provide sufficient high grade positions to retain the current grade structure. However, after considerable time and effort, a satisfactory method of defining duties and responsibilities has still not been achieved and would prevent this arrangement form being implemented quickly. The biggest problem with this arrangement is that it does not meet several CPO requirements in that the office chiefs could not meet the requirements for their high, supervisory grades in these positions and all of the team leaders would have to be GMs.

Option 4: This option represents a compromise or a hybrid of Options 1 and 3. In this arrangement, the long term, functional teams which provide technology bases, would be placed under divisions in a similar arrangement as Option 1. Both the division chief and the team leaders would be GM grades. The limited number of "Product Teams" (representing developmental items in 6.2 and 6.3A) would be headed by GM team leaders, but would report directly to the director.

While the product teams would be empowered automatically by the organizational arrangement, the empowerment of the functional teams would depend on the managerial style of the division chief. It would meet the CPO requirements as well as providing sufficient high grade positions to retain the current grade structure. Because of its similarity to the existing organization, it would provide fairly clear duties and responsibilities and acts to partially flatten the organization. It would retain the limited ability to integrate the technology across the hierarchial functional teams. Also, some modifications to existing duties and processes would be required, but these could be determined in a fairly short time.

Option 5: This arrangement is essentially like Option 4, except the functional and product team leaders are GS grades. This has all of the advantages of Option 4, but also flattens the organization with regard to the number of official supervisory levels but would not satisfy the grade retention requirement.

VII. EC ANALYSIS

The EC model used in the analysis is shown in Figure 2. Under the Goal, as stated, are the various criteria considered in this analysis. In this case, there is only a single level of criteria. Under each criterion is listed the five alternatives (i.e., organizational arrangement options). Abbreviated terminology has been substituted to identify the different criteria and alternatives as noted in the glossary of the figure.

The first step in the decision making process is to determine the relative importance (i.e., weight) for each criterion. This is accomplished by comparing each criterion with every other criterion and assigning a subjective degree of relative importance of the one criterion over the other in satisfying the stated "Goal." The EC procedure is to initially determine which of the two is the more important. The degrees of importance range from the two criteria being "Equal" to the one being "Extreme." This range represents an order of magnitude difference in levels of importance. Various intermediate degrees of importance can also be selected; moderate, strong, and very strong. An example from this evaluation is shown in Figure 3. All of the Criteria rating values selected in this analysis are summarized in Appendix I. The EC program computes the

corresponding final priorities (weights) in terms of a fraction of importance for each criterion relative to the goal with the sum of all the criteria factors add up to unity.

The final Criteria priorities are summarized in Figure 4. Note that, for this analysis, the CPO criterion has the highest value. This indicates the importance of meeting the CPO requirements. This criterion is extremely important in that all CPO regulations must be satisfied to be acceptable. It's either all or none for this criterion. It is truly a "show stopper!" Note that Empowerment, Technical Integration, and Duties are at next lower level of importance and all have about the same weight. Finally, Grades, Flattening, and Fast Implementation are all also of equal value and the lowest in weight.

The next step in the EC decision making process is performed by comparing the various alternative organizational arrangements with respect to each other on the basis how much more the one is preferred over the other in meeting each of the criterion. As before, the specific degree of preference is made subjectively by the individual performing the analysis. The degrees of preference are the same as before. In this particular case, "Preference" could be replaced by "Most Likely to Meet." An example of this evaluation is shown in Figure 5. The program also summarizes the "best choice" for each Criterion an example of which is contained in Figure 6. Appendix II contains a summary of all of the individual ratings selected during this analysis. After each alternative is compared to every other alternative for each criterion, the EC program computes the relative ranking of the alternatives in best meeting the objective of the analysis. This is depicted in bar graph form in Figure 7.

Note: Since each alternative is compared with each other, the EC program can evaluate the consistency of the preferences. This is denoted by the "Inconsistency Index." A value of less than .1 is considered to indicate a consistent analysis. There is nothing wrong with being inconsistent if this is the true preference of the individual performing the analysis.

In this case, the ranking was (highest to lowest): Options 4, 1 ,5, 2, and 3 with the top four options being fairly close together and Option 3 being significantly lower. Figure 8 shows the relative importance of the Criteria on the left and the resulting relative values of the organizational arrangement options on the right. It should be noted that the options selected relate a consideration of all of the criteria together.

Figure 9 contains a graph which shows how each Organizational Arrangement option rating for each individual criterion with the final overall ranking shown on the far right of the chart. This chart indicates why the decision of an organizational arrangement

was so difficult. Note, how Option 3 is either the "best" or the "worst" choice for every criterion. Its graph fluctuates from one extreme to the other resulting in a sawtooth shaped graph, with the final averaged value being midway between these extremes. This effect is not apparent by viewing only the final answer. The other options do not have near the extreme range as option 3, but still come out on top when all criteria are considered.

VIII. DISCUSSION OF RESULTS

In addition to determining the "best choice," the EC program also allows an insight into the sensitivity of the final answer to the relative importance given to the criteria. Graphs are created which depict the value of the alternatives as a function of the priority or weight of each criterion. A vertical line in each graph denotes the priority used in the current analysis as a reference point. Considering the values indicated at the extreme ends of these priorities and judging whether they make sense in a qualitative sense can provide a degree of validity and confidence to the overall results. The sensitivity of the option ranking on the priority of each criterion will be discussed separately.

Sensitivity to Empowerment:

The sensitivity of the final choice to the priority or importance given to "empowerment" is shown in Figure 10. This illustrates that if Empowerment is of no importance (i.e., Priority = 0), Option 3 is still the worst choice with all of the other options being about equal. However, if Empowerment is extremely important (i.e., Priority = 1), Option 3 is far and away the best choice. As can be seen the slope (direction and steepness) of the curve for each option indicates its dependence on the criteria. Not also, that options 4 and 5 are not affected by Empowerment in that their curves are almost flat.

Sensitivity to CPO:

As shown in Figure 11, when the importance of meeting the CPO regulations is not critical (Priority of CPO = 0), Option 3 comes out on top. However, if the CPO is important (i.e., Priority of CPO = 1), Option 3 becomes very low while the other options are higher and equal to each other. This makes sense, in that the inability to meet the CPO requirements was a key stumbling block to the adoption of Option 3.

Sensitivity to Technical Integration:

Figure 12 depicts how a low priority for Technical Integration results in a low rating for Option 3 with the other options being rated higher and at the same value. On the other hand, a high priority for Technical Integration makes Option 3 by far the best

choice, with Options 1 and 2 the worst and Options 4 and 5 being somewhere in between which makes sense when considering the increased rigidity of the conventional line element organizations.

Sensitivity to Grades:

The sensitivity to Grades is contained in Figure 13. If retaining the current grade structure is not important (as considered in this analysis), all of the options are about the same. If Grades are important, Options 4 and 1 are the best and Option 3 is next highest. Options 2 and 5 are the poorest choice because they possess the least number of positions for high grades.

Sensitivity to Duties:

For the low priority of Duties considered in this analysis, all of the options are about the same as indicated in Figure 14. If clarity of duties are important, Options 1 and 2 which represent the most clear-cut, hierarchial organizations, are preferred. As expected, Option 3, for which the duties and responsibilities are extremely nebulous, comes out at the bottom.

Sensitivity to Flattening the Organization:

If flattening the organization is not a critical concern, as shown in Figure 15, all of the options are about the same. If it is highly critical, Option 3 comes out clearly on top with Options 5, 4, 2, and 1 close to the bottom as expected of these highly structured, multi-layered arrangements.

Sensitivity to Fast Implementation:

As can be seen in Figure 16, if rapid implementation is not an important factor, all of the options are nearly equal, with option 3 being slightly lower. If rapid implementation is very important, Options 1 and 2, for which the detailed processes are already well understood, come out on top and option 3 which is least settled, comes out on the bottom.

IX. SUMMARY AND CONCLUSIONS

1. The EC program was utilized to select the "best choice" of an organizational arrangement for the Research and Technology Directorate on the basis of several criteria (objectives, requirements, and constraints) established for the ERDEC reorganization effort.

2. The following seven criteria (and their abbreviations) were considered:

* Maximize team empowerment (Empower)

* Meet existing CPO regulations (CPO)

* Allow technical integration across organizational elements (Tech Itg)

* Provide clear duties and responsibilities (Duties)

* Flatten the organization (Flat Org)

* Can be implementated quickly (Fast Imp)

3. Subjective prioritization of these Criteria resulted in the following weighted values:

Criterion	Weight
CPO	.569
Empower	.123
Tech Itg	.113
Duties	.110
Fast Imp	.039
Grades	.024
Flat Org	.023
	1.000

4. Five organizational arrangement options were considered:

Option 1: Director over GM headed divisions over GM headed teams.

Option 2: Director over GM headed divisions over GS headed teams.

Option 3: Director over GM/GS headed teams. GM headed departments provide personnel supervision and GM headed offices provide program planning.

Option 4: Director over GM headed functional divisions over GM headed functional teams. Director also over GM headed product teams.

Option 5: Director over GM headed functional divisions over GS headed functional teams. Director also over GS headed product teams.

5. Based on best satisfying the Criteria considered, the "best choice" and their relative values are as follows:

Rank	Option	Value
1	4	.226
2	1	.214
3	5	.208
4	2	.202
5	3	.150
		1.000

6. The most interesting arrangement considered was Option 3 which was intended to best provide the empowered team concept. The major factor responsible for its not being rated more favorably is the high importance given to meeting the existing CPO regulations. This single factor was most responsible for eliminating Option 3. The next most important factor in eliminating Option 3 was the difficulty in clearly defining duties and responsibilities associated with this option which also negated its rapid implementation. If these overriding constraints were to be eliminated, the results would be much more favorable toward Option 3.

7. The results of this analysis reveal how difficult it is to attain new and unorthodox organizational arrangements within the constraints imposed by existing government regulations: in particular, the CPO and grade level requirements.

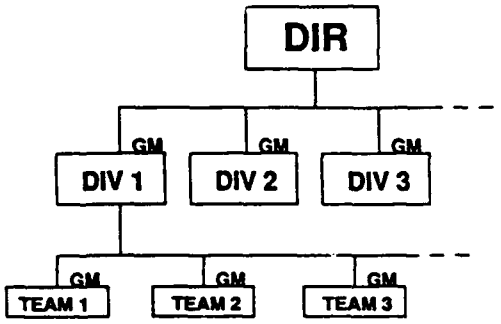
8. This analysis was conducted by two individuals with somewhat different backgrounds and perspectives of the issue at hand. Because of the subjective nature of the EC process, others performing this analysis may obtain different results. However, the results presented here appear to make qualitative sense with regard to the individual characteristics of the options considered.

X. REFERENCES

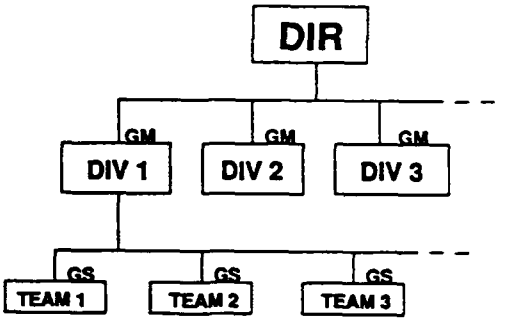
1. "Expert Choice, Inc.," Decision Support Software, Inc., 4922 Ellsworth Avenue, Pittsburgh, PA, 15213.

2. Briefing and notes presented by J. Vervier to the Research and Technology Directorate on 21 December 1992.

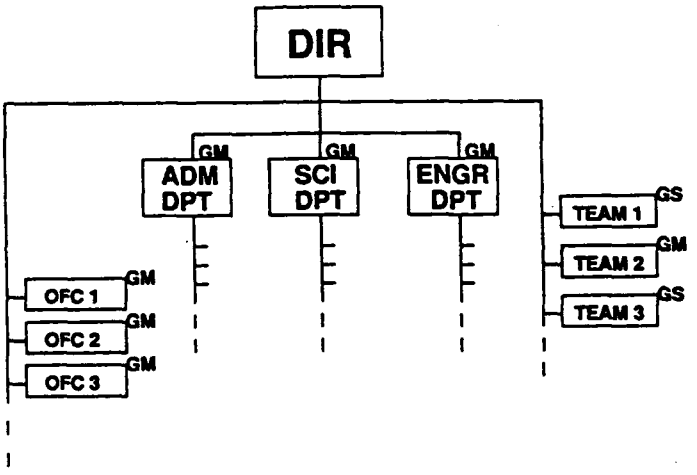
OPTION 1



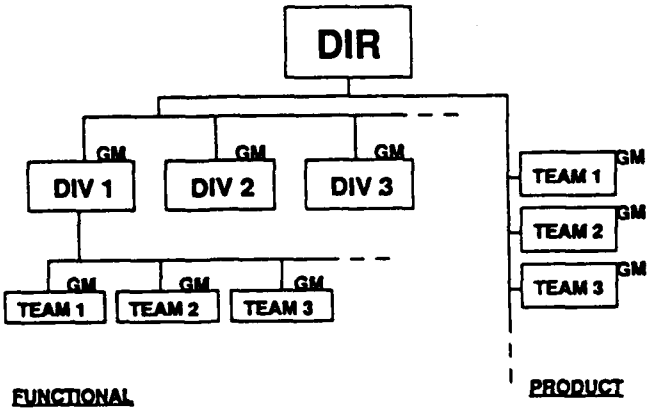
OPTION 2



OPTION 3



OPTION 4



OPTION 5

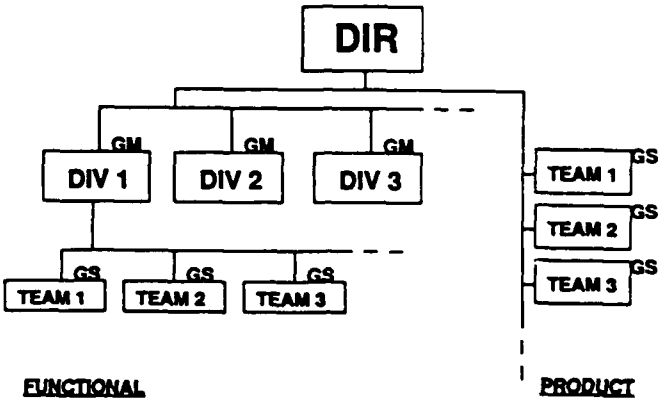
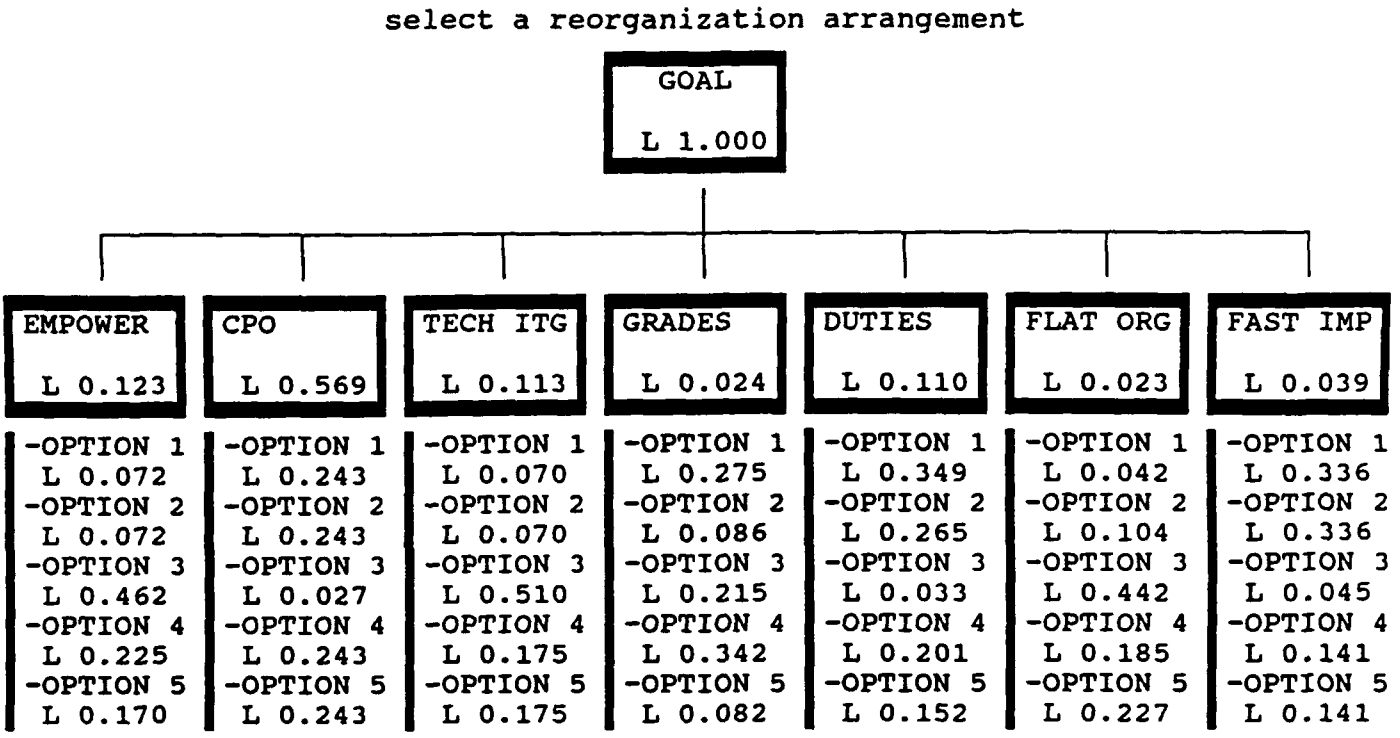


Figure 1. Alternative Organizational Arrangements



CPO --- Meets all CPO guidelines and constraints.
DUTIES --- Clear understanding of duties and responsibilities.
EMPOWER --- Allows empowerment of team leaders.
FAST IMP --- Fast or rapid implementation with existimg teams.
FLAT ORG --- Reduce levels of mgt required for decision-making.
GRADES --- Does not result in short-term loss of grade structure.
OPTION 1 --- Dir to Div(GM) to Team(GM).
OPTION 2 --- Dir to Div(GM) to Team(GS).
OPTION 3 --- Dir to Dept(GM), Ofc(GM), Team(GM/GS).
OPTION 4 --- Dir to Div(GM) to Functional Br(GM), Product Team(GM).
OPTION 5 --- Dir to Div(GM) to Functional Team(GS), Product Team(GS).
TECH ITG --- Allows technical integration across teams and snr lvl support.

L --- LOCAL PRIORITY: PRIORITY RELATIVE TO PARENT

Figure 2. Expert Choice Model

GOAL: select a reorganization arrangement

With respect to
GOAL

EMPOWER :Allows empowerment of team leaders.
is STRONGLY more IMPORTANT than
GRADES :Does not result in short-term loss of grade structure.

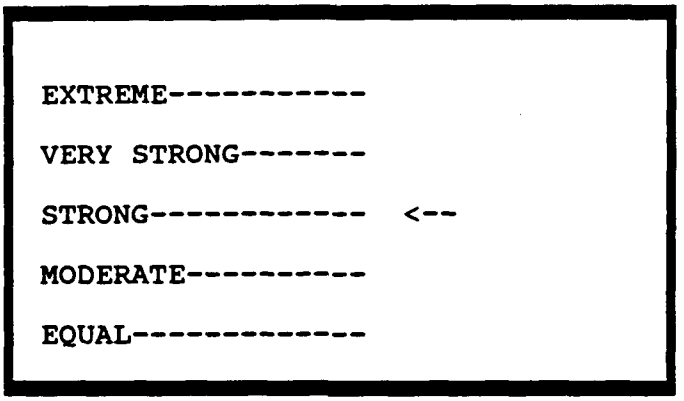


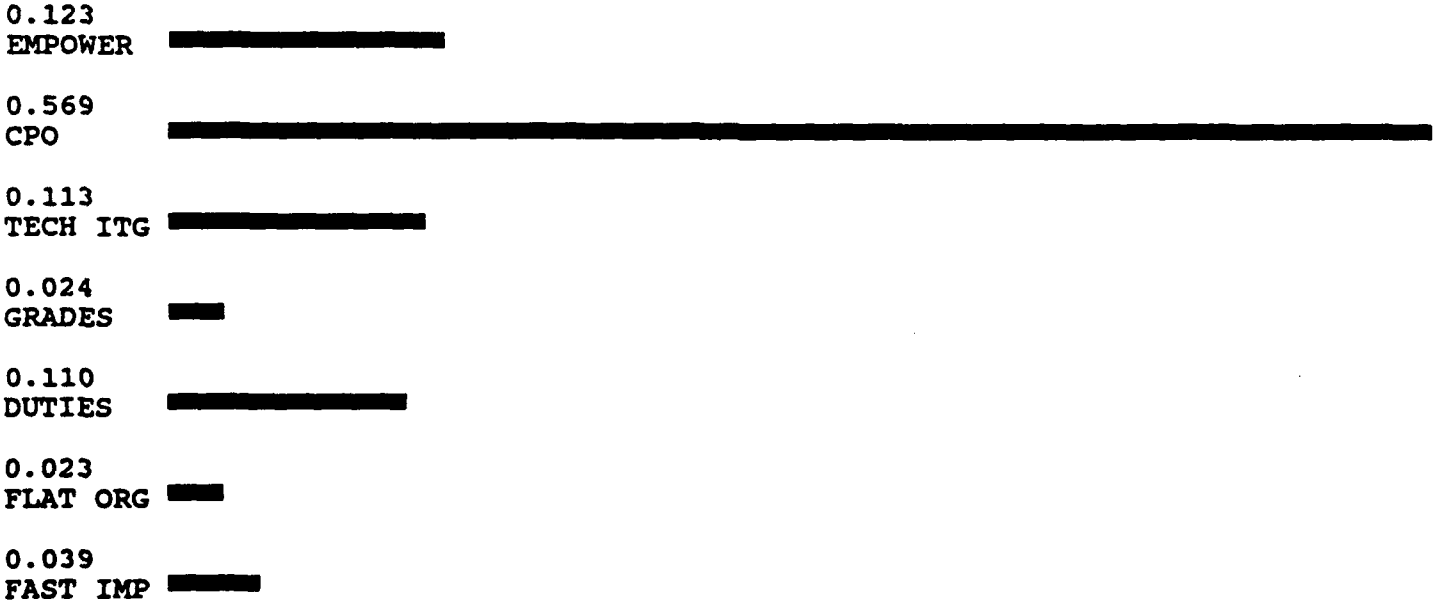
Figure 3. Example of Prioritization of Criterion

JUDGMENTS AND PRIORITIES WITH RESPECT TO
GOAL

	EMPOWER	CPO	TECH ITG	GRADES	DUTIES	FLAT ORG	FAST IMP
EMPOWER		(9.0)	1.0	5.0	1.0	7.0	7.0
CPO			9.0	9.0	9.0	9.0	9.0
TECH ITG				6.0	1.0	6.0	5.0
GRADES					(5.0)	1.0	(3.0)
DUTIES						6.0	5.0
FLAT ORG							(3.0)
FAST IMP							

Matrix entry indicates that ROW element is ___
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY
more IMPORTANT than COLUMN element
unless enclosed in parenthesis.

EMPOWER :Allows empowerment of team leaders.
CPO :Meets all CPO guidelines and constraints.
TECH ITG :Allows technical integration across teams and snr lvl support.
GRADES :Does not result in short-term loss of grade structure.
DUTIES :Clear understanding of duties and responsibilities.
FLAT ORG :Reduce levels of mgt required for decision-making.
FAST IMP :Fast or rapid implementation with existimg teams.



INCONSISTENCY RATIO = 0.102

Figure 4. Final Priorities of Criteria

GOAL: select a reorganization arrangement

With respect to
GOAL > EMPOWER

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is STRONGLY more PREFERABLE than
OPTION 1 :Dir to Div(GM) to Team(GM).

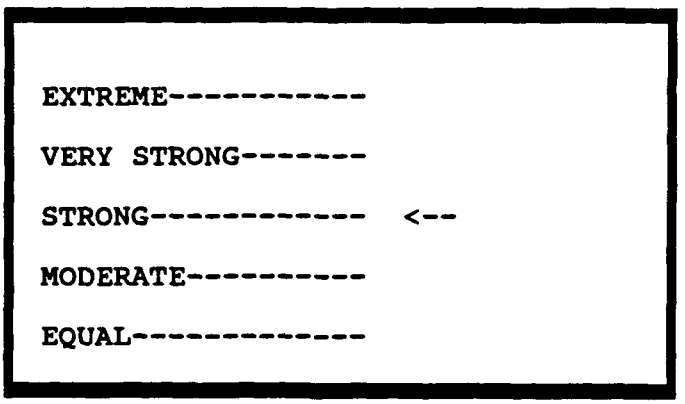


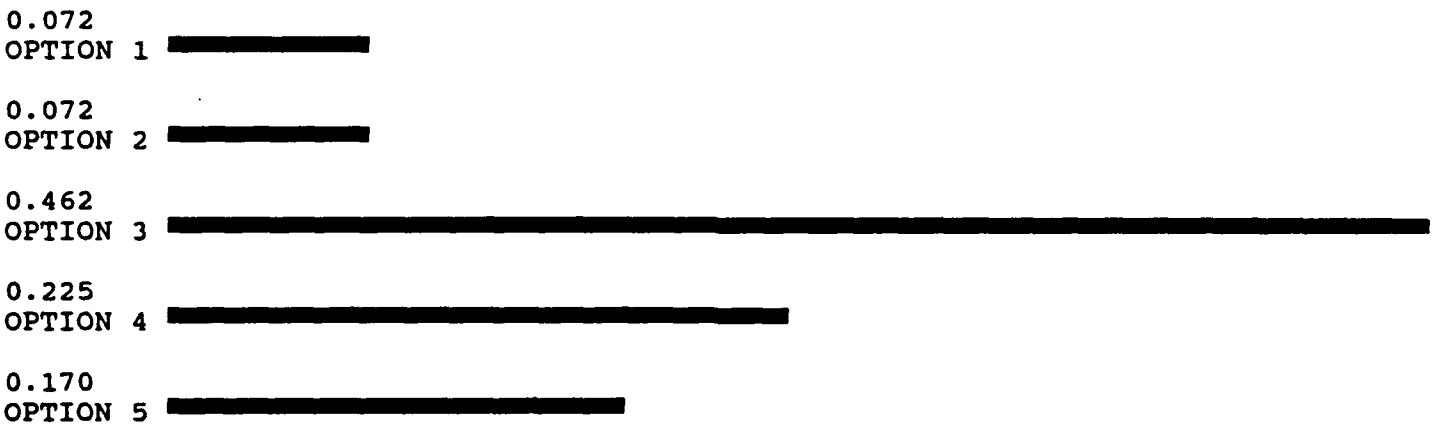
Figure 5. Example of Prioritization of Alternate Organizational Arrangements

JUDGMENTS AND PRIORITIES WITH RESPECT TO
GOAL > EMPOWER

	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
OPTION 1		1.0	(5.0)	(3.0)	(3.0)
OPTION 2			(5.0)	(3.0)	(3.0)
OPTION 3				3.0	3.0
OPTION 4					2.0
OPTION 5					

Matrix entry indicates that ROW element is ___
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY more PREFERABLE than COLUMN element
unless enclosed in parenthesis.

OPTION 1 :Dir to Div(GM) to Team(GM).
OPTION 2 :Dir to Div(GM) to Team(GS).
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



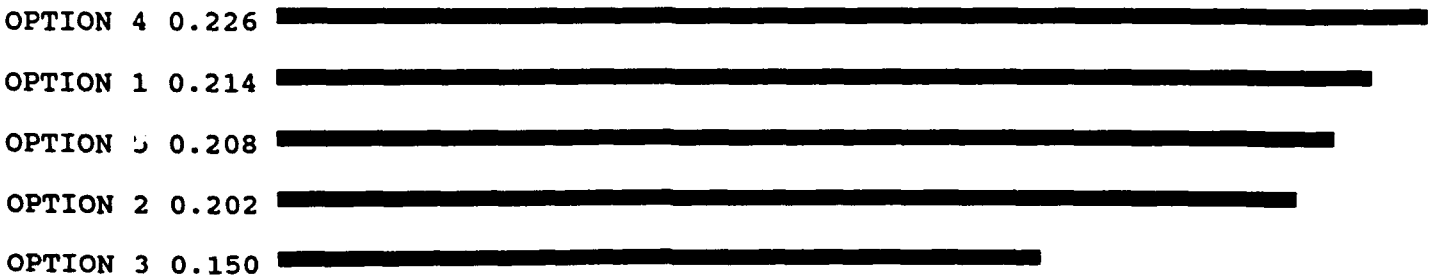
INCONSISTENCY RATIO = 0.026

Figure 6. Example of Alternative Ranking for Single Criterion

select a reorganization arrangement

Sorted Synthesis of Leaf Nodes with respect to GOAL

OVERALL INCONSISTENCY INDEX = 0.09



OPTION 1 --- Dir to Div(GM) to Team(GM).
OPTION 2 --- Dir to Div(GM) to Team(GS).
OPTION 3 --- Dir to Dept(GM), Ofc(GM), Team(GM/GS).
OPTION 4 --- Dir to Div(GM) to Functional Br(GM), Product Team(GM).
OPTION 5 --- Dir to Div(GM) to Functional Team(GS), Product Team(GS).

Figure 7. Final Ranking of Alternative Organizational Arrangements Considering All Criteria

select a reorganization arrangement

Sorted Details for Sorted Synthesis of Leaf Nodes with respect to GOAL

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
CPO =0.569				
.	OPTION 1 =0.138			
.	OPTION 2 =0.138			
.	OPTION 4 =0.138			
.	OPTION 5 =0.138			
.	OPTION 3 =0.015			
EMPOWER =0.123				
.	OPTION 3 =0.057			
.	OPTION 4 =0.028			
.	OPTION 5 =0.021			
.	OPTION 1 =0.009			
.	OPTION 2 =0.009			
TECH ITG =0.113				
.	OPTION 3 =0.058			
.	OPTION 4 =0.020			
.	OPTION 5 =0.020			
.	OPTION 1 =0.008			
.	OPTION 2 =0.008			
DUTIES =0.110				
.	OPTION 1 =0.038			
.	OPTION 2 =0.029			
.	OPTION 4 =0.022			
.	OPTION 5 =0.017			
.	OPTION 3 =0.004			
FAST IMP =0.039				
.	OPTION 1 =0.013			
.	OPTION 2 =0.013			
.	OPTION 4 =0.005			
.	OPTION 5 =0.005			
.	OPTION 3 =0.002			
GRADES =0.024				
.	OPTION 4 =0.008			
.	OPTION 1 =0.007			
.	OPTION 3 =0.005			
.	OPTION 2 =0.002			
.	OPTION 5 =0.002			
FLAT ORG =0.023				
.	OPTION 3 =0.010			
.	OPTION 5 =0.005			
.	OPTION 4 =0.004			
.	OPTION 2 =0.002			
.	OPTION 1.96E-03			

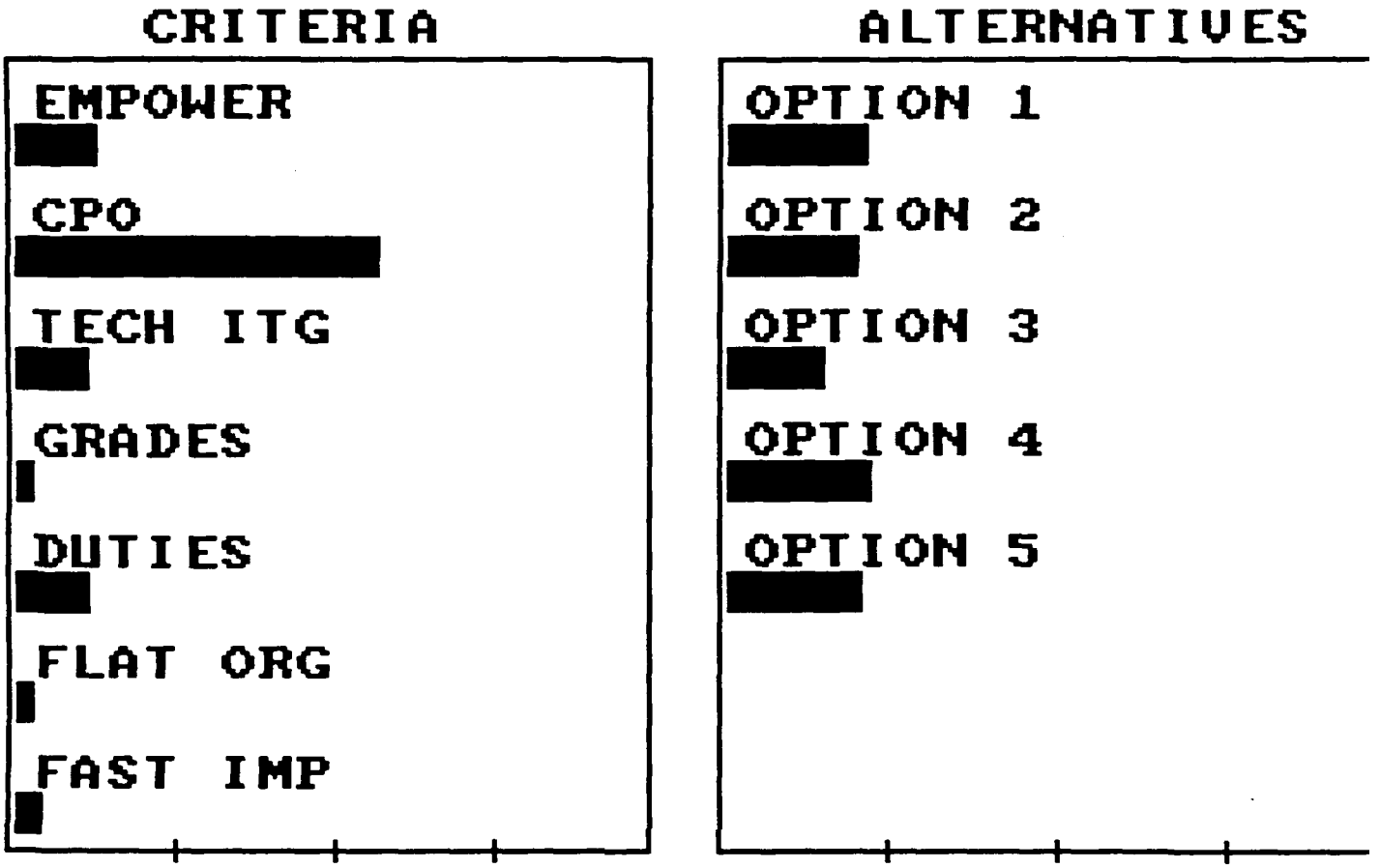


Figure 8. Bar Graphs of Criteria Priorities and Alternative Organizational Arrangement Rankings

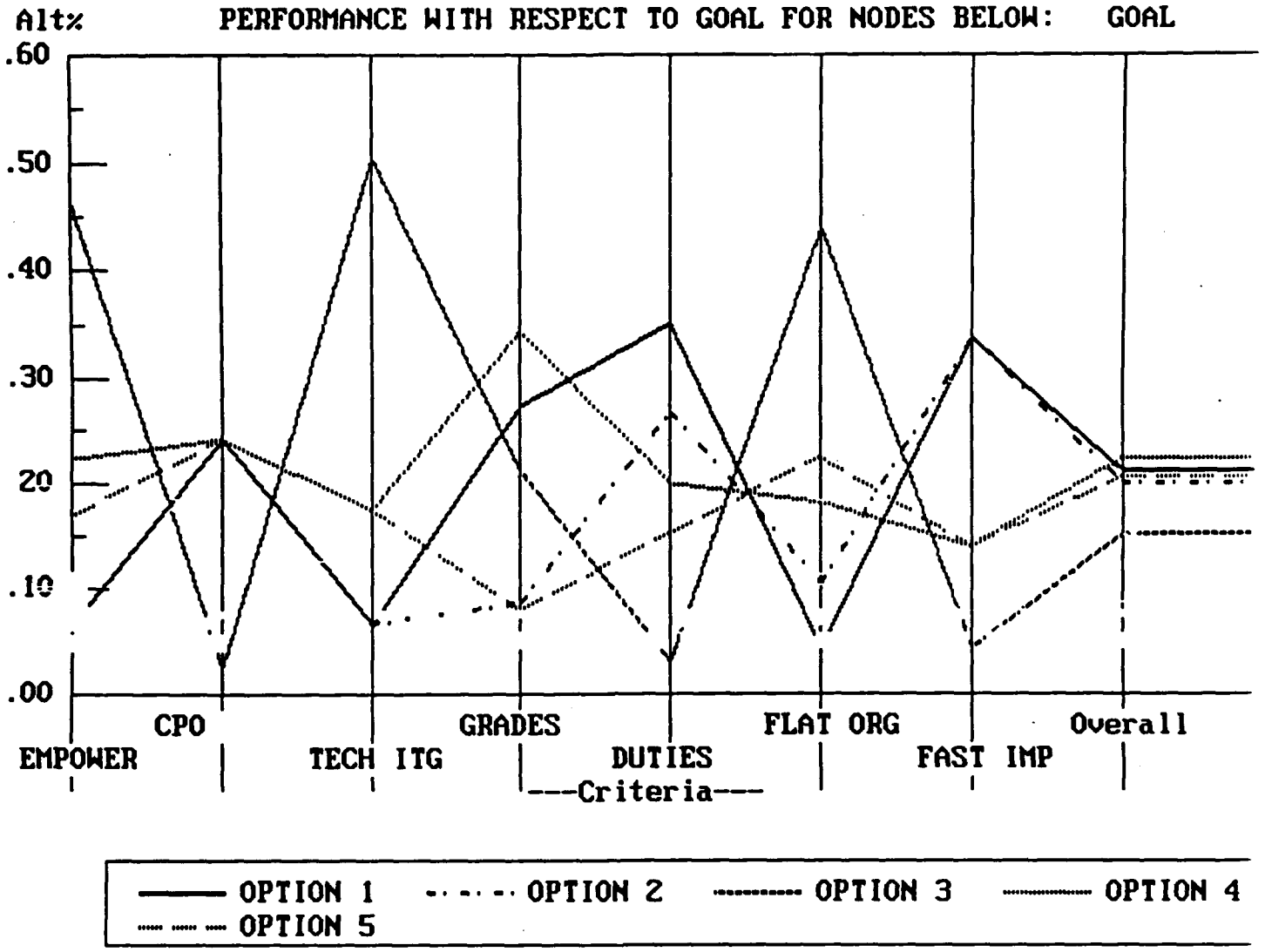


Figure 9. Summary Graph of Alternative Organizational Arrangement Rankings for Individual and Combined Criteria

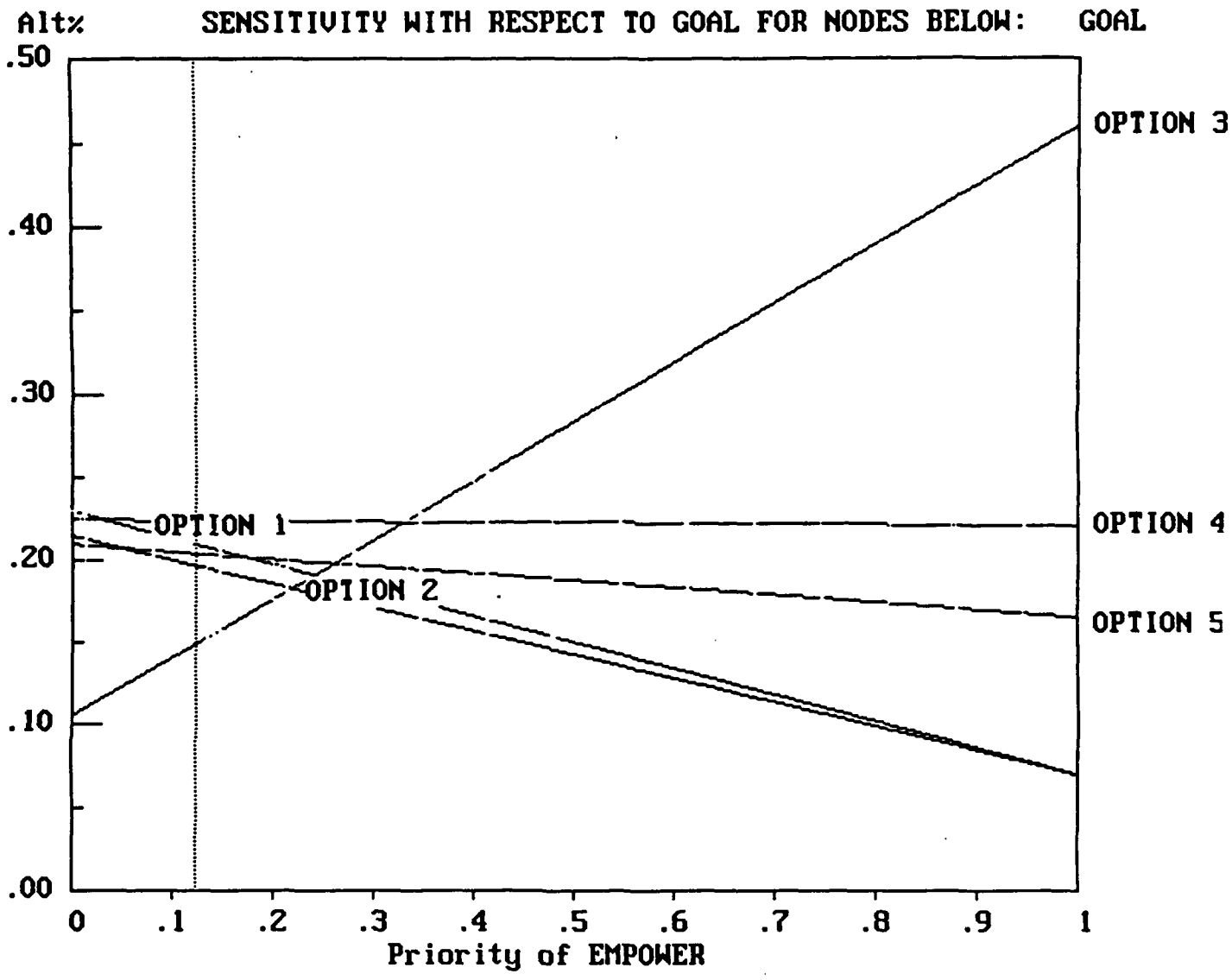


Figure 10. Sensitivity of Results to "Team Empowerment"

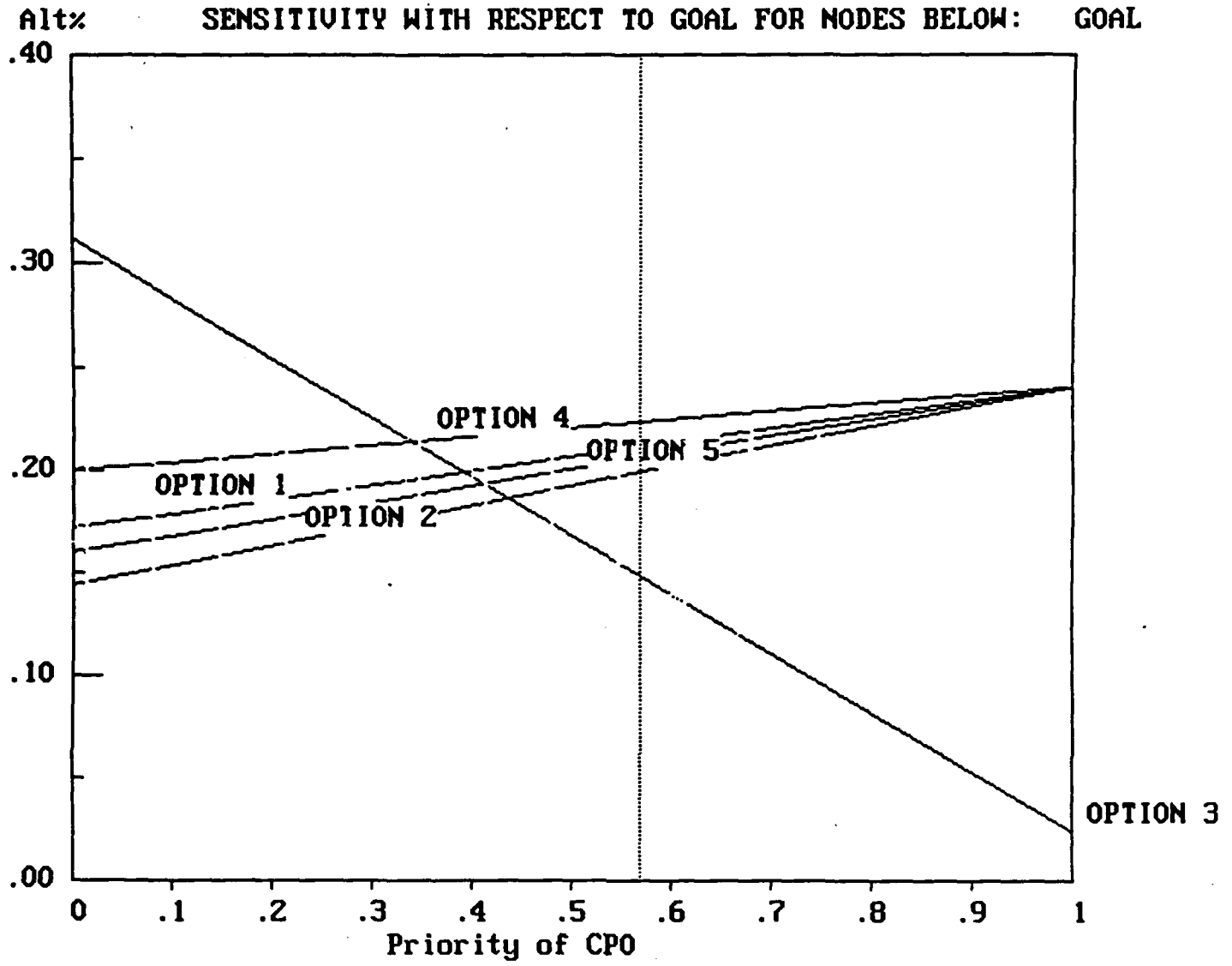


Figure 11. Sensitivity of Results to "Meeting CPO Regulations"

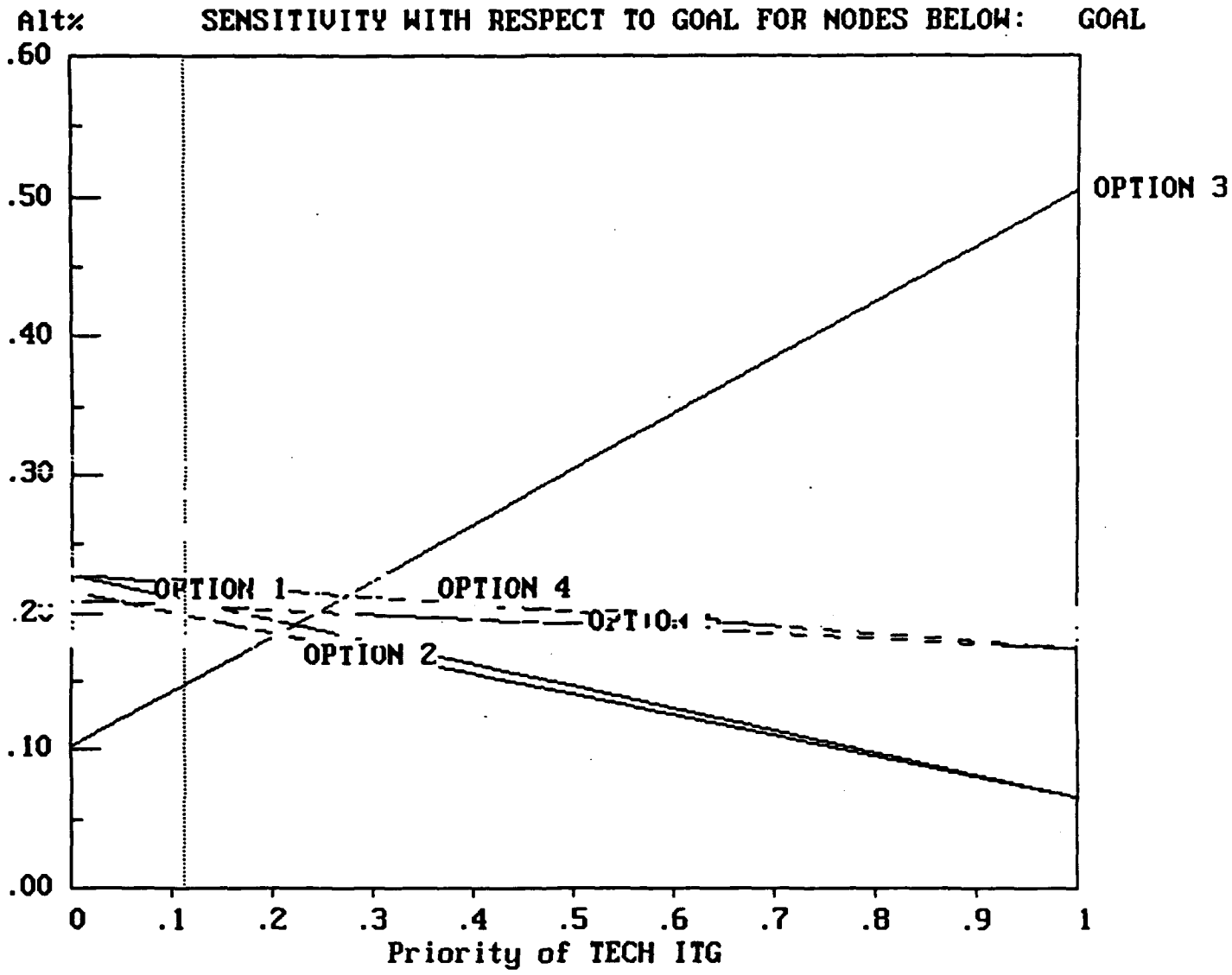


Figure 12. Sensitivity of Results to "Technical Integration"

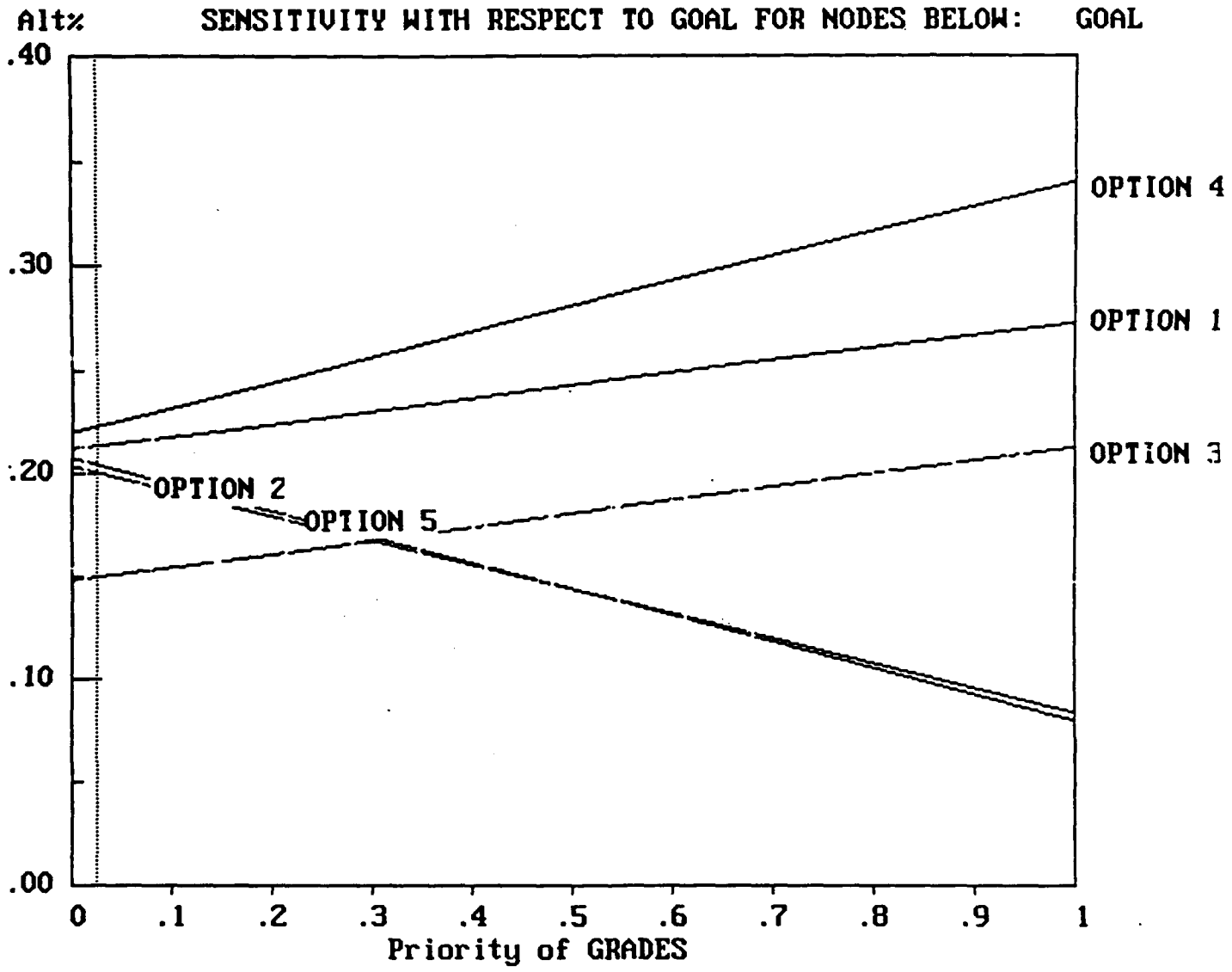


Figure 13. Sensitivity of Results to "Maintaining Grades"

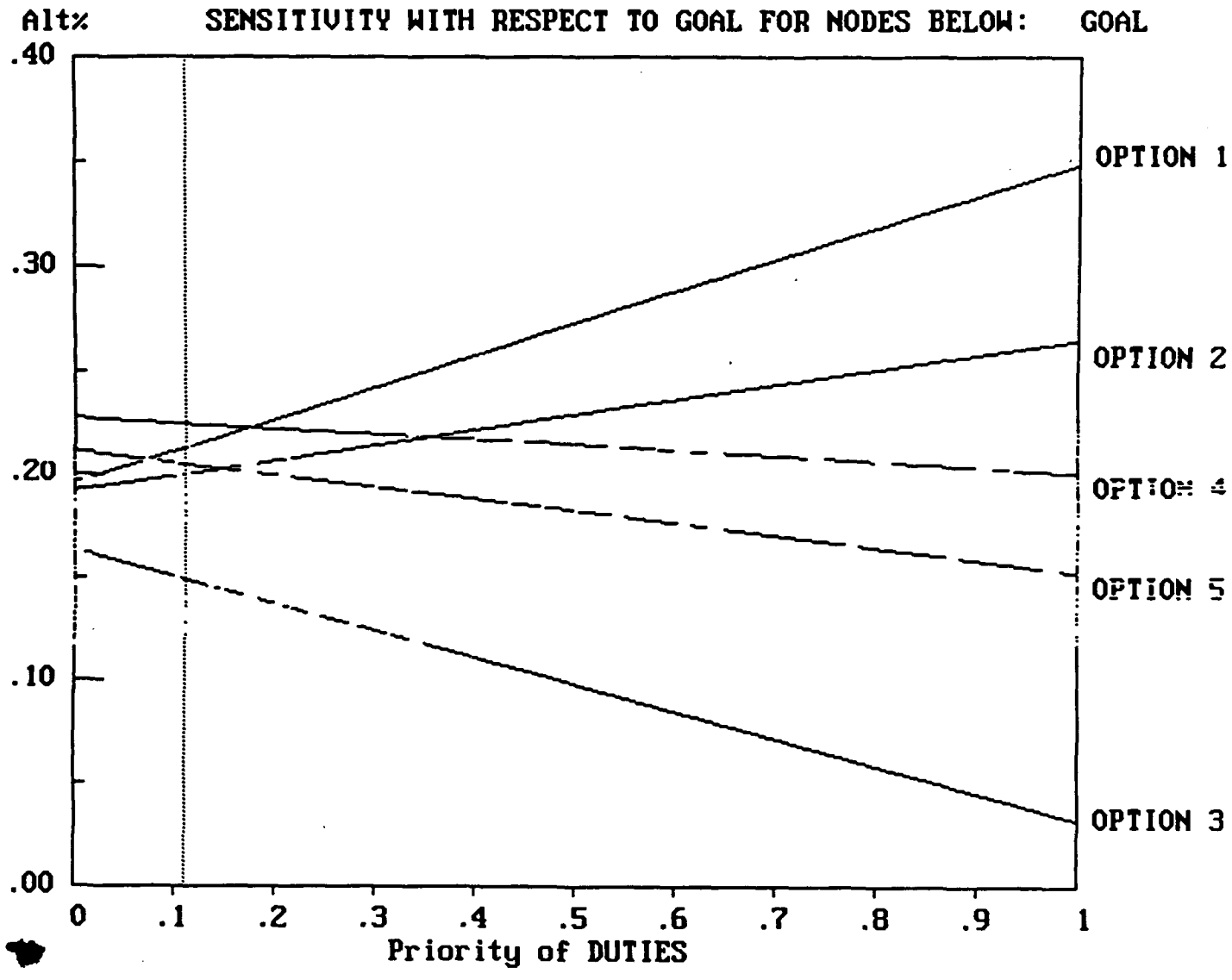


Figure 14. Sensitivity of Results to "Clear Duties"

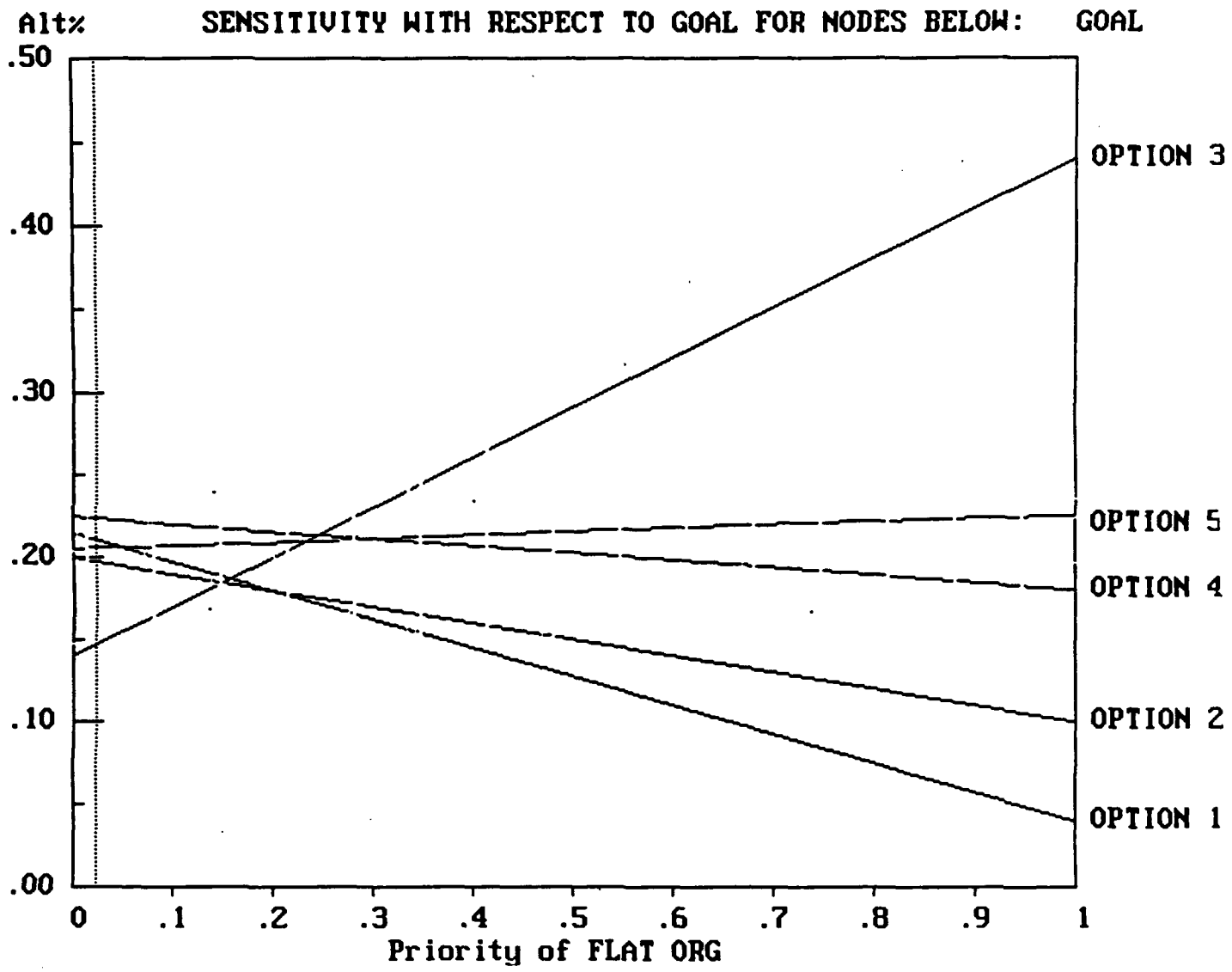


Figure 15. Sensitivity of Results to "Flatten Organization"

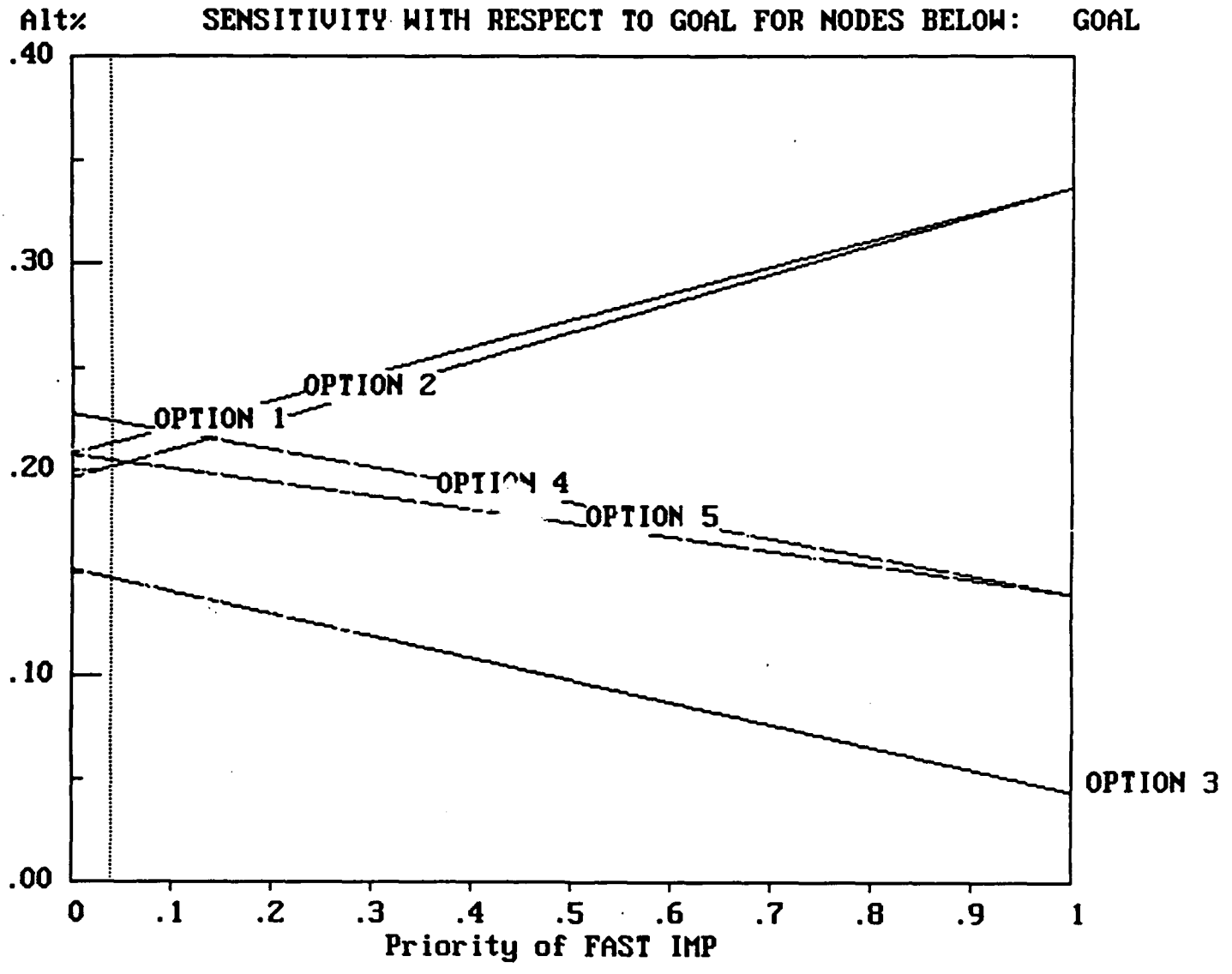


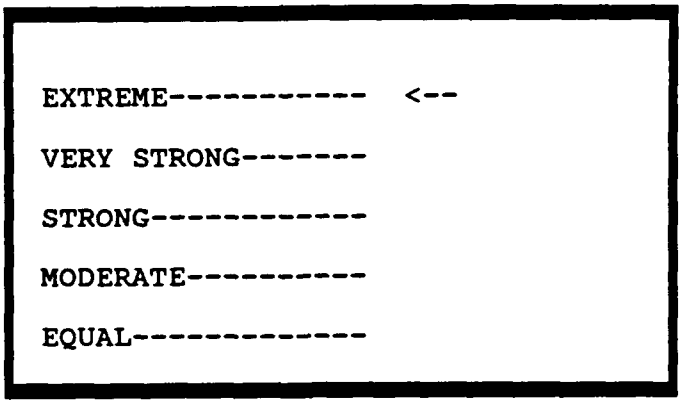
Figure 16. Sensitivity of Results to "Fast Implementation"

APPENDIX I

Summary of Preferences Used to Determine Criteria Priorities

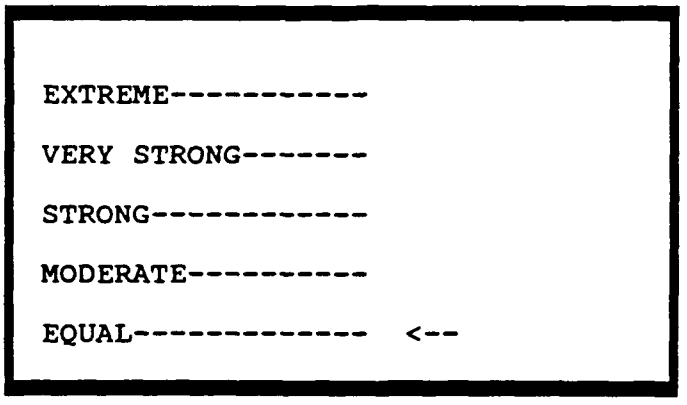
With respect to
GOAL

CPO :Meets all CPO guidelines and constraints.
is EXTREMELY more IMPORTANT than
EMPOWER :Allows empowerment of team leaders.



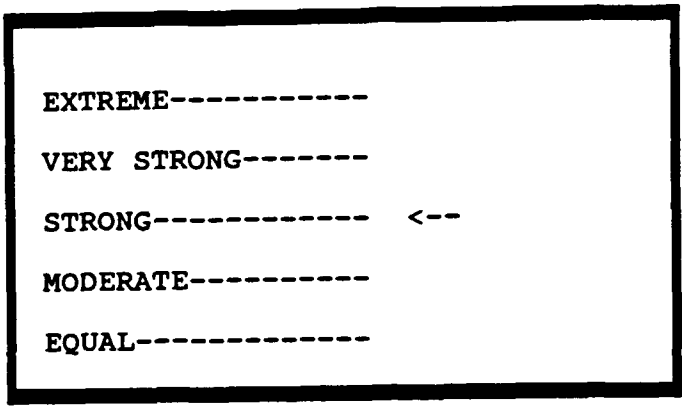
With respect to
GOAL

EMPOWER :Allows empowerment of team leaders.
is EQUALLY as IMPORTANT as
TECH ITG :Allows technical integration across teams and snr lvl support.



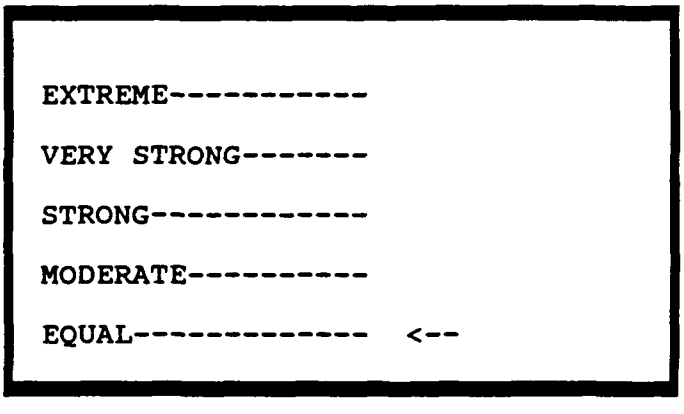
With respect to
GOAL

EMPOWER :Allows empowerment of team leaders.
is STRONGLY more IMPORTANT than
GRADES :Does not result in short-term loss of grade structure.



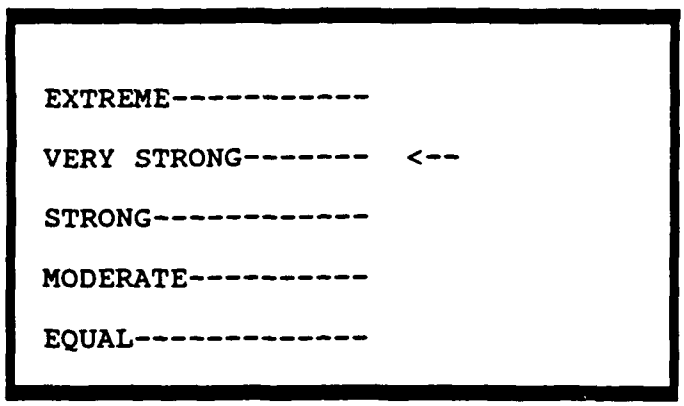
With respect to
GOAL

EMPOWER :Allows empowerment of team leaders.
is EQUALLY as IMPORTANT as
DUTIES :Clear understanding of duties and responsibilities.



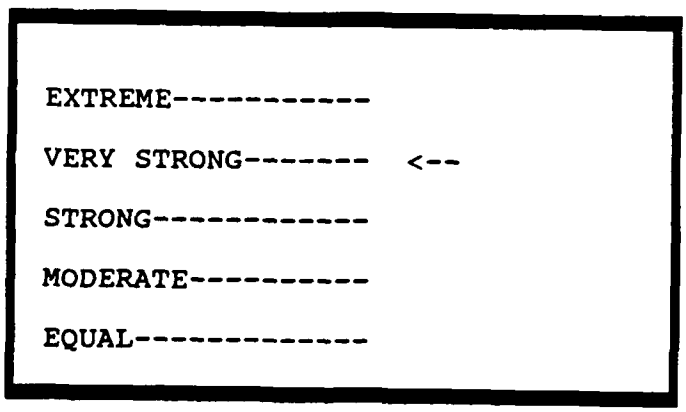
With respect to
GOAL

EMPOWER :Allows empowerment of team leaders.
is VERY STRONGLY more IMPORTANT than
FLAT ORG :Reduce levels of mgt required for decision-making.



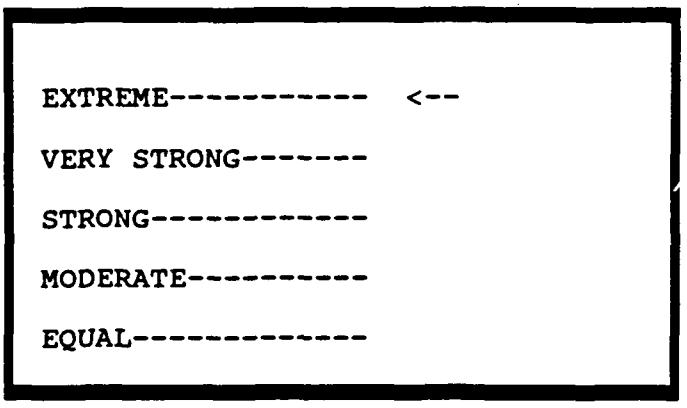
With respect to
GOAL

EMPOWER :Allows empowerment of team leaders.
is VERY STRONGLY more IMPORTANT than
FAST IMP :Fast or rapid implementation with existimg teams.



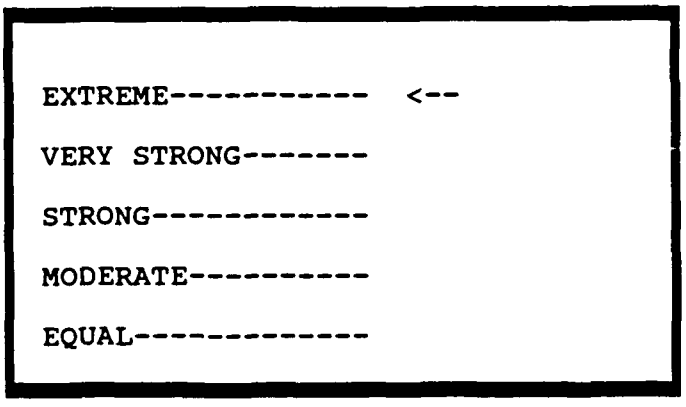
With respect to
GOAL

CPO :Meets all CPO guidelines and constraints.
is EXTREMELY more IMPORTANT than
TECH ITG :Allows technical integration across teams and snr lvl support.



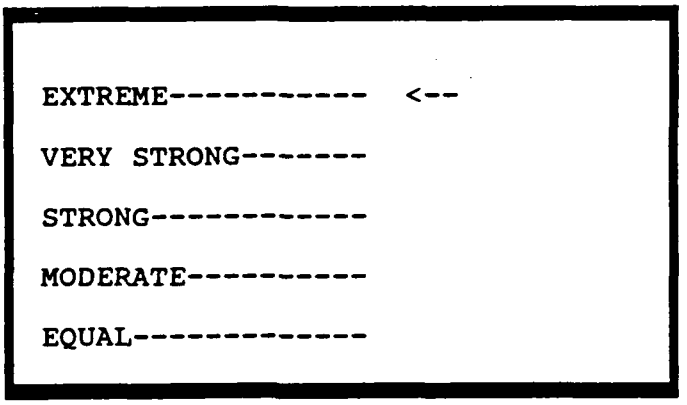
With respect to
GOAL

CPO :Meets all CPO guidelines and constraints.
is EXTREMELY more IMPORTANT than
GRADES :Does not result in short-term loss of grade structure.



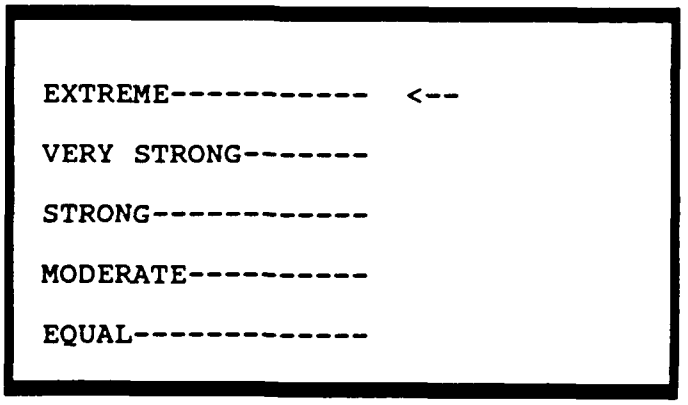
With respect to
GOAL

CPO :Meets all CPO guidelines and constraints.
is EXTREMELY more IMPORTANT than
DUTIES :Clear understanding of duties and responsibilities.



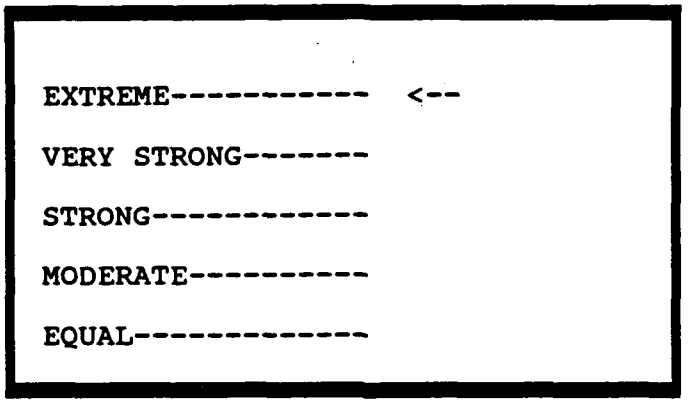
With respect to
GOAL

CPO :Meets all CPO guidelines and constraints.
is EXTREMELY more IMPORTANT than
FLAT ORG :Reduce levels of mgt required for decision-making.



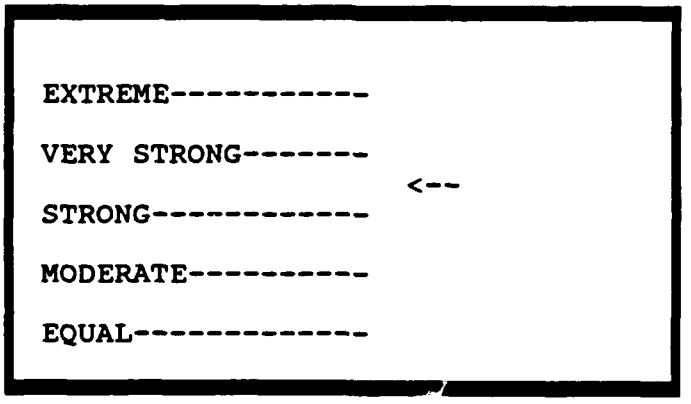
With respect to
GOAL

CPO :Meets all CPO guidelines and constraints.
is EXTREMELY more IMPORTANT than
FAST IMP :Fast or rapid implementation with existimg teams.



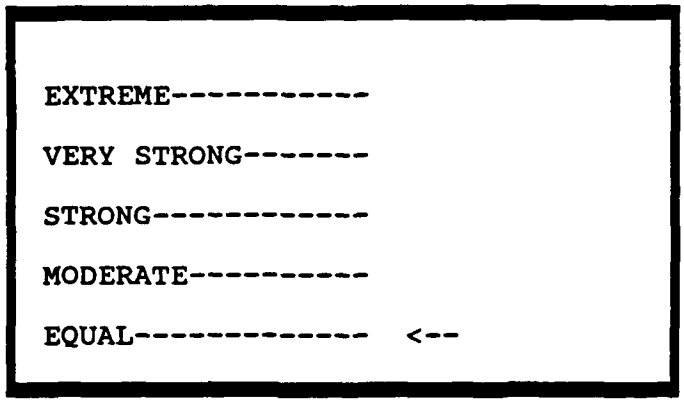
With respect to
GOAL

TECH ITG :Allows technical integration across teams and snr lvl support.
is STRONG to VERY STRONGLY more IMPORTANT than
GRADES :Does not result in short-term loss of grade structure.



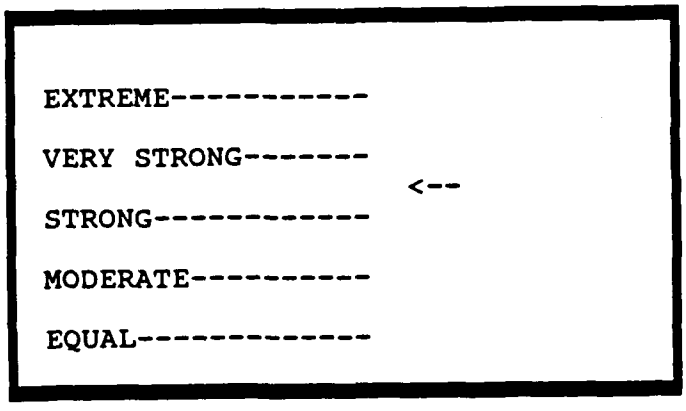
With respect to
GOAL

TECH ITG :Allows technical integration across teams and snr lvl support.
is EQUALLY as IMPORTANT as
DUTIES :Clear understanding of duties and responsibilities.



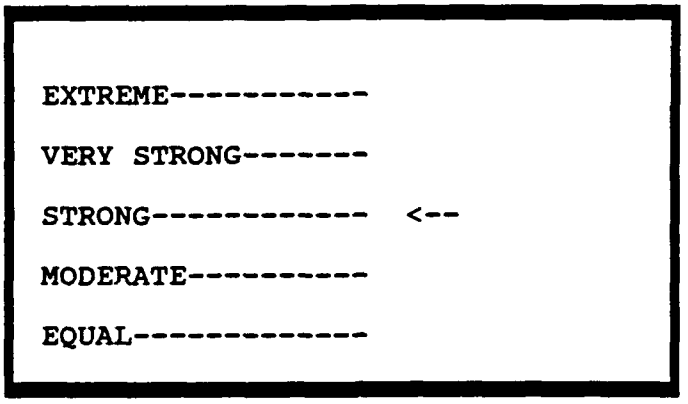
With respect to
GOAL

TECH ITG :Allows technical integration across teams and snr lvl support.
is STRONG to VERY STRONGLY more IMPORTANT than
FLAT ORG :Reduce levels of mgt required for decision-making.



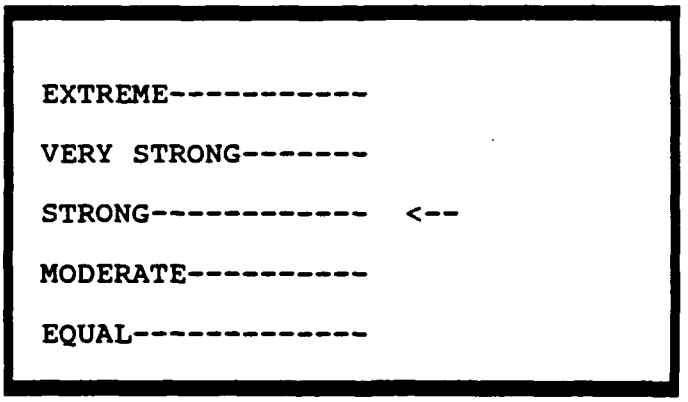
With respect to
GOAL

TECH ITG :Allows technical integration across teams and snr lvl support.
is STRONGLY more IMPORTANT than
FAST IMP :Fast or rapid implementation with existimg teams.



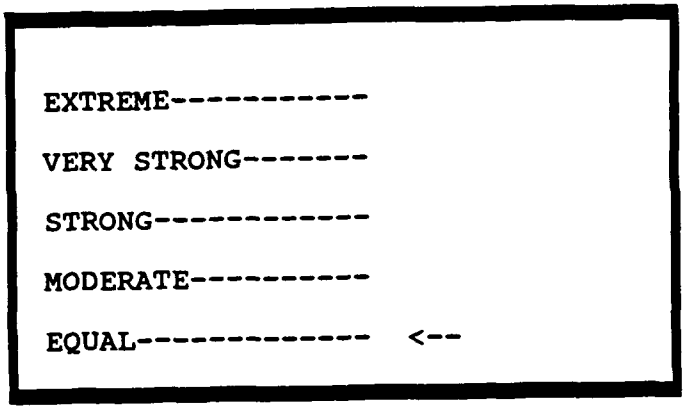
With respect to
GOAL

DUTIES :Clear understanding of duties and responsibilities.
is STRONGLY more IMPORTANT than
GRADES :Does not result in short-term loss of grade structure.



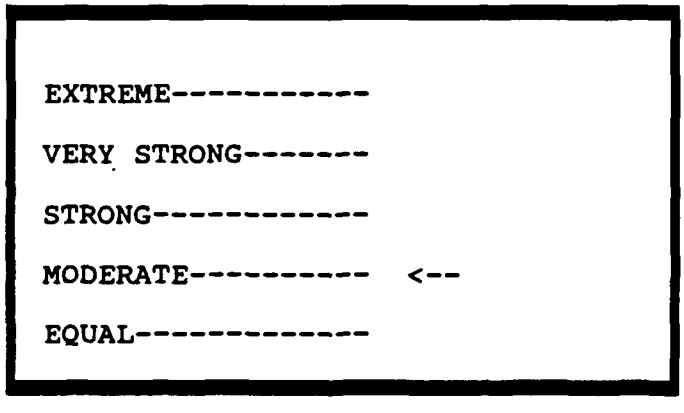
With respect to
GOAL

GRADES :Does not result in short-term loss of grade structure.
is EQUALLY as IMPORTANT as
FLAT ORG :Reduce levels of mgt required for decision-making.



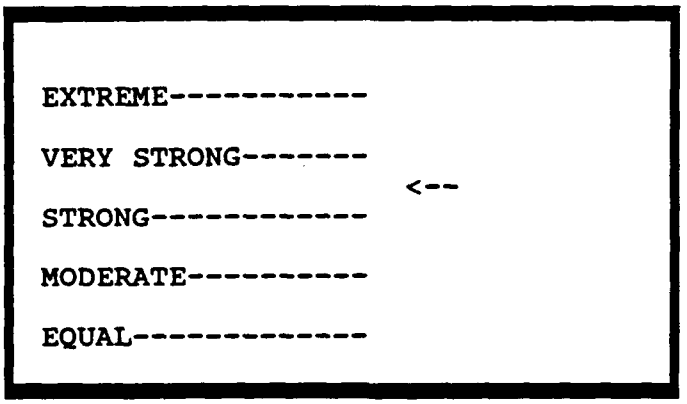
With respect to
GOAL

FAST IMP :Fast or rapid implementation with existimg teams.
is MODERATELY more IMPORTANT than
GRADES :Does not result in short-term loss of grade structure.



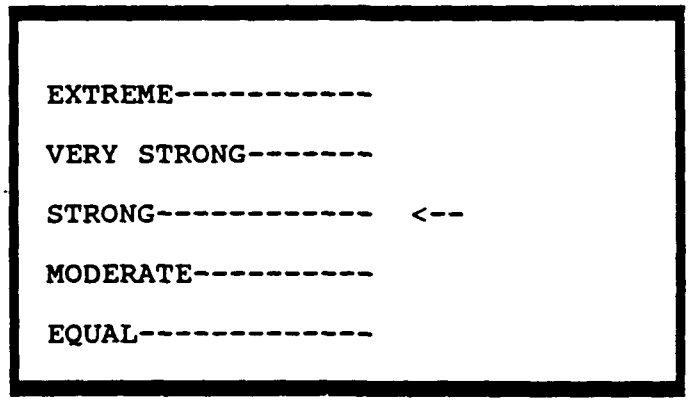
With respect to
GOAL

DUTIES :Clear understanding of duties and responsibilities.
is STRONG to VERY STRONGLY more IMPORTANT than
FLAT ORG :Reduce levels of mgt required for decision-making.



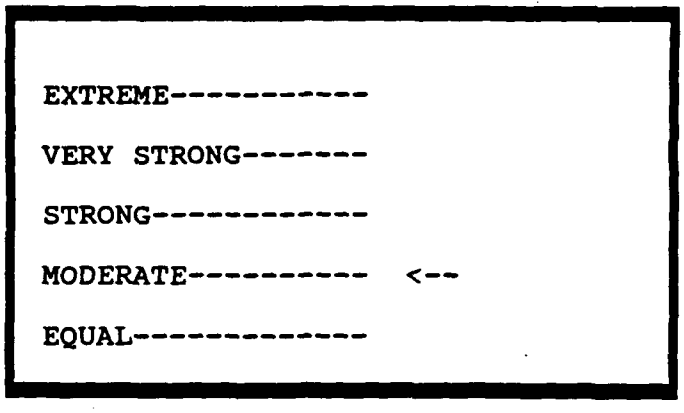
With respect to
GOAL

DUTIES :Clear understanding of duties and responsibilities.
is STRONGLY more IMPORTANT than
FAST IMP :Fast or rapid implementation with existimg teams.



With respect to
GOAL

FAST IMP :Fast or rapid implementation with existimg teams.
is MODERATELY more IMPORTANT than
FLAT ORG :Reduce levels of mgt required for decision-making.



JUDGMENTS AND PRIORITIES WITH RESPECT TO
GOAL

	EMPOWER	CPO	TECH ITG	GRADES	DUTIES	FLAT ORG	FAST IMP
EMPOWER		(9.0)	1.0	5.0	1.0	7.0	7.0
CPO			9.0	9.0	9.0	9.0	9.0
TECH ITG				6.0	1.0	6.0	5.0
GRADES					(5.0)	1.0	(3.0)
DUTIES						6.0	5.0
FLAT ORG							(3.0)
FAST IMP							

Matrix entry indicates that ROW element is
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY
more IMPORTANT than COLUMN element
unless enclosed in parenthesis.

EMPOWER :Allows empowerment of team leaders.
CPO :Meets all CPO guidelines and constraints.
TECH ITG :Allows technical integration across teams and snr lvl support.
GRADES :Does not result in short-term loss of grade structure.
DUTIES :Clear understanding of duties and responsibilities.
FLAT ORG :Reduce levels of mgt required for decision-making.
FAST IMP :Fast or rapid implementation with existimg teams.

0.123
EMPOWER

0.569
CPO

0.113
TECH ITG

0.024
GRADES

0.110
DUTIES

0.023
FLAT ORG

0.039
FAST IMP

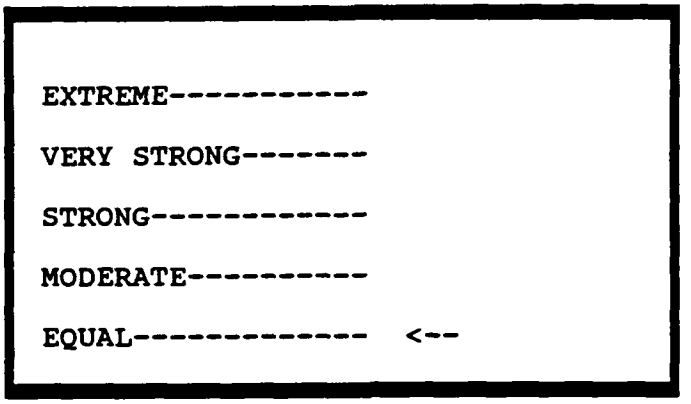
INCONSISTENCY RATIO = 0.102

APPENDIX II

Summary of Preferences Used to Determine Alternative Organizational Arrangements for Each Criterion

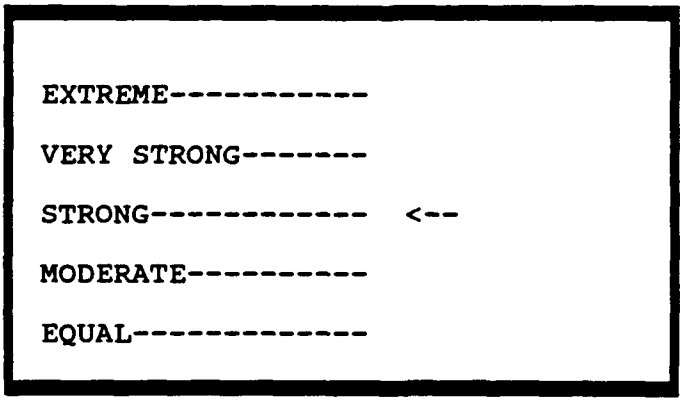
With respect to
GOAL > EMPOWER

OPTION 1 :Dir to Div(GM) to Team(GM).
is EQUALLY as PREFERABLE as
OPTION 2 :Dir to Div(GM) to Team(GS).



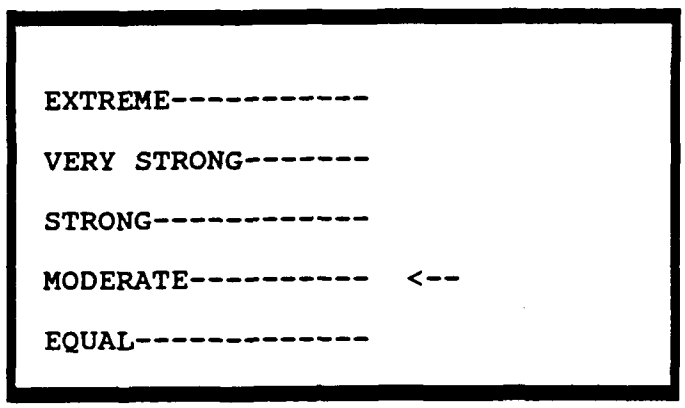
With respect to
GOAL > EMPOWER

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is STRONGLY more PREFERABLE than
OPTION 1 :Dir to Div(GM) to Team(GM).



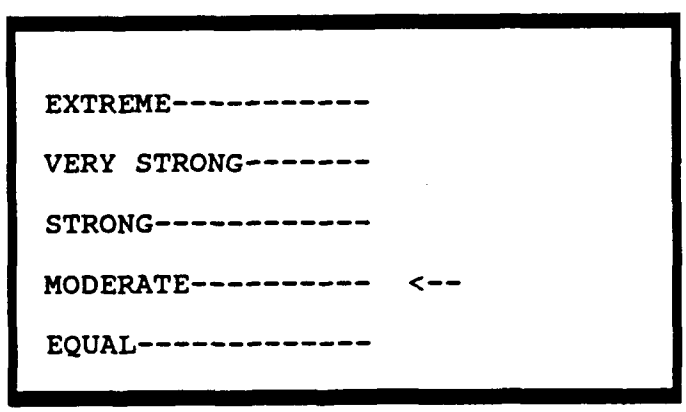
With respect to
GOAL > EMPOWER

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is MODERATELY more PREFERABLE than
OPTION 1 :Dir to Div(GM) to Team(GM).



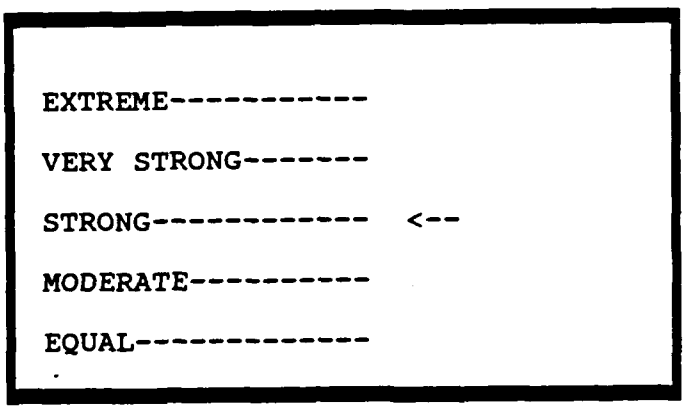
With respect to
GOAL > EMPOWER

OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).
is MODERATELY more PREFERABLE than
OPTION 1 :Dir to Div(GM) to Team(GM).



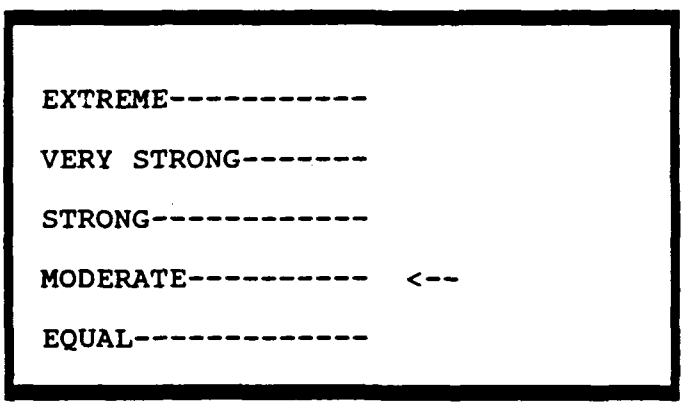
With respect to
GOAL > EMPOWER

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is STRONGLY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



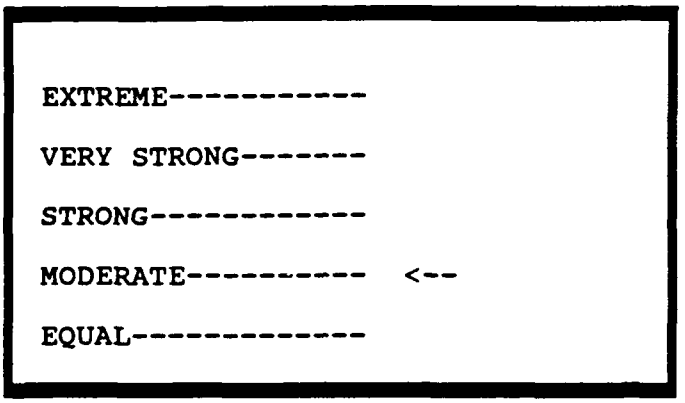
With respect to
GOAL > EMPOWER

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is MODERATELY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



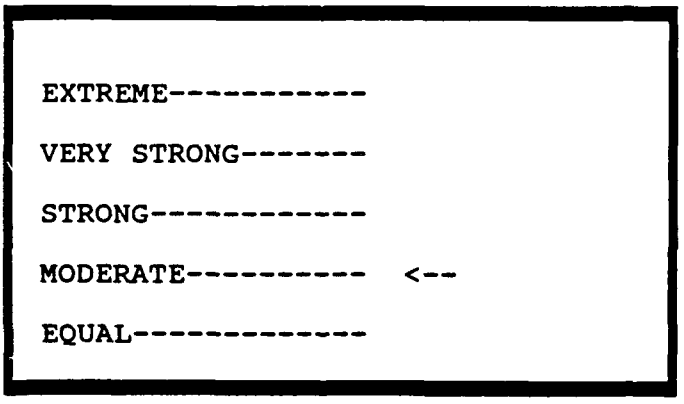
With respect to
GOAL > EMPOWER

OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).
is MODERATELY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



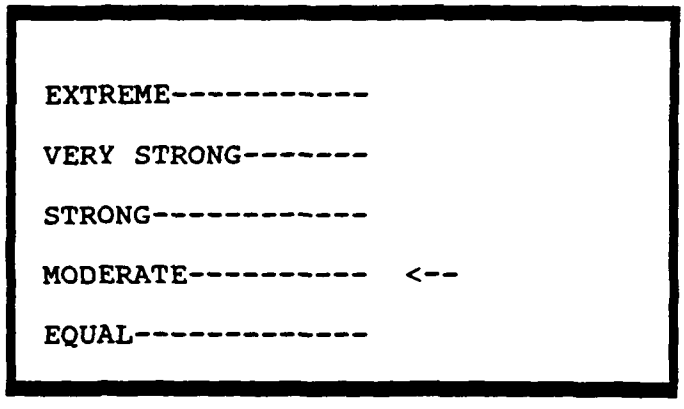
With respect to
GOAL > EMPOWER

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is MODERATELY more PREFERABLE than
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).



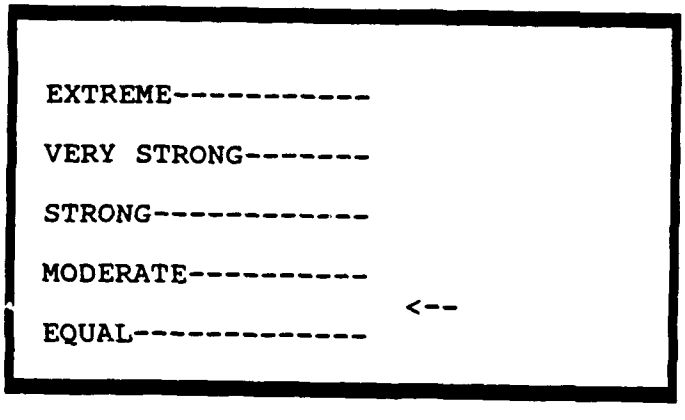
With respect to
GOAL > EMPOWER

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is MODERATELY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



With respect to
GOAL > EMPOWER

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is EQUAL to MODERATELY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).

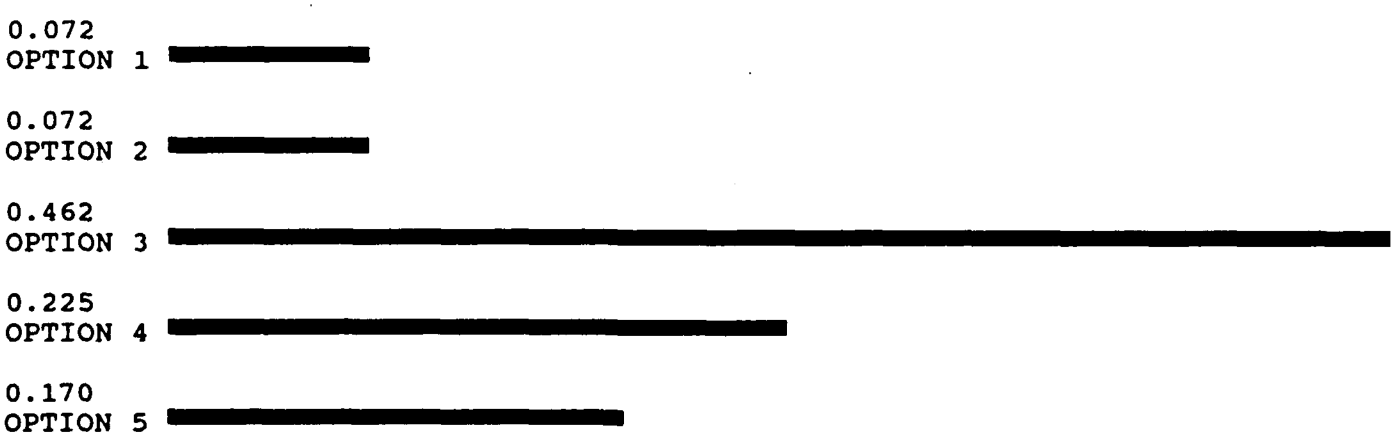


JUDGMENTS AND PRIORITIES WITH RESPECT TO
GOAL > EMPOWER

	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
OPTION 1		1.0	(5.0)	(3.0)	(3.0)
OPTION 2			(5.0)	(3.0)	(3.0)
OPTION 3				3.0	3.0
OPTION 4					2.0
OPTION 5					

Matrix entry indicates that ROW element is ___
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY
more PREFERABLE than COLUMN element
unless enclosed in parenthesis.

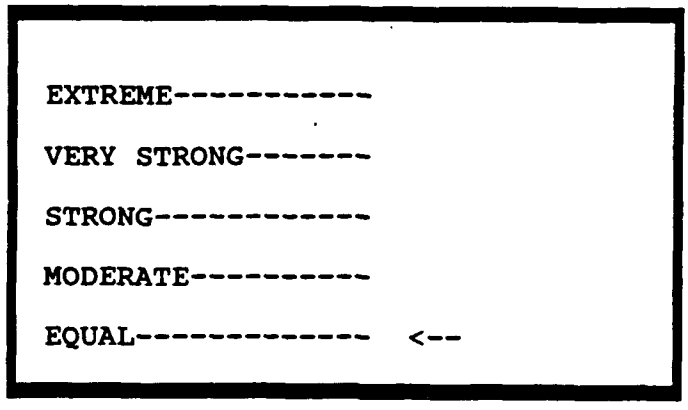
OPTION 1 :Dir to Div(GM) to Team(GM).
OPTION 2 :Dir to Div(GM) to Team(GS).
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



INCONSISTENCY RATIO = 0.026

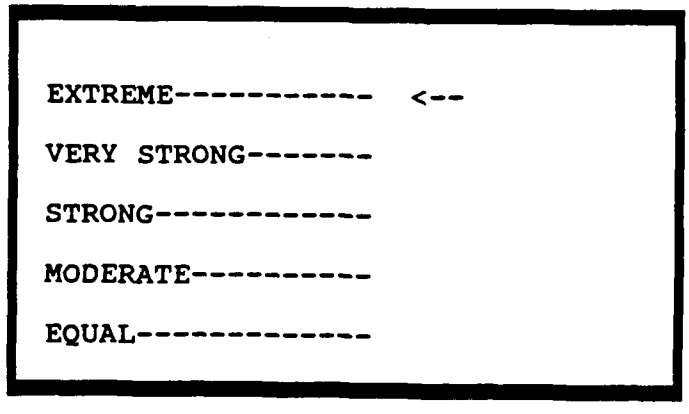
With respect to
GOAL > CPO

OPTION 1 :Dir to Div(GM) to Team(GM).
is EQUALLY as PREFERABLE as
OPTION 2 :Dir to Div(GM) to Team(GS).



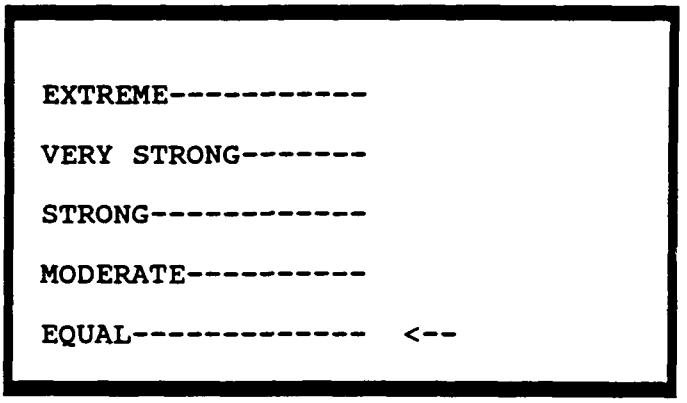
With respect to
GOAL > CPO

OPTION 1 :Dir to Div(GM) to Team(GM).
is EXTREMELY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



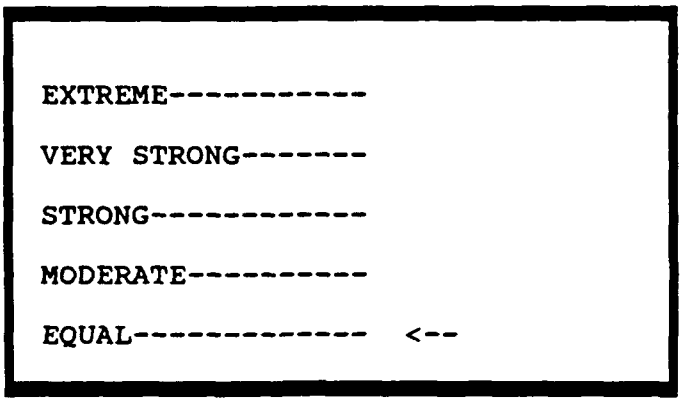
With respect to
GOAL > CPO

OPTION 1 :Dir to Div(GM) to Team(GM).
is EQUALLY as PREFERABLE as
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).



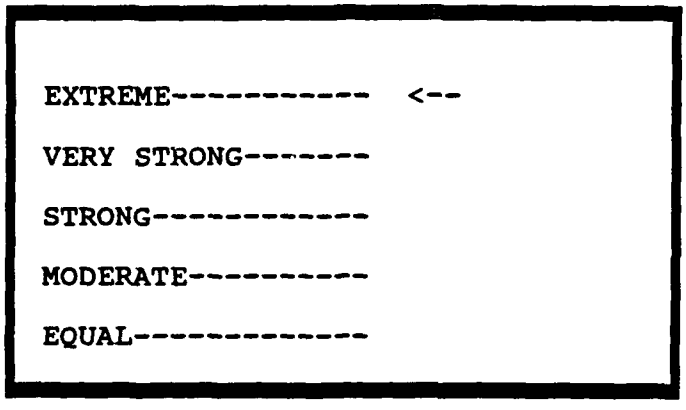
With respect to
GOAL > CPO

OPTION 1 :Dir to Div(GM) to Team(GM).
is EQUALLY as PREFERABLE as
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



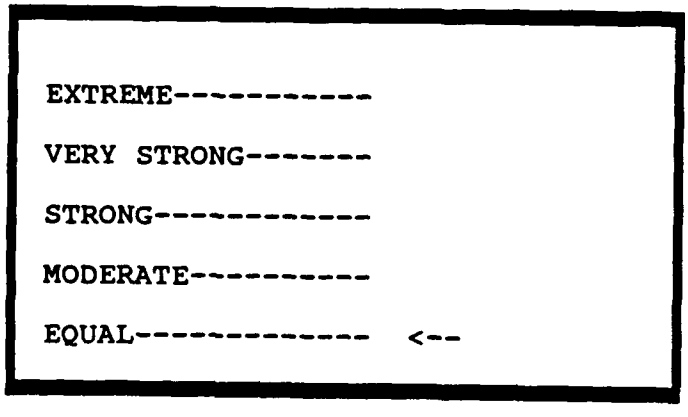
With respect to
GOAL > CPO

OPTION 2 :Dir to Div(GM) to Team(GS).
is EXTREMELY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



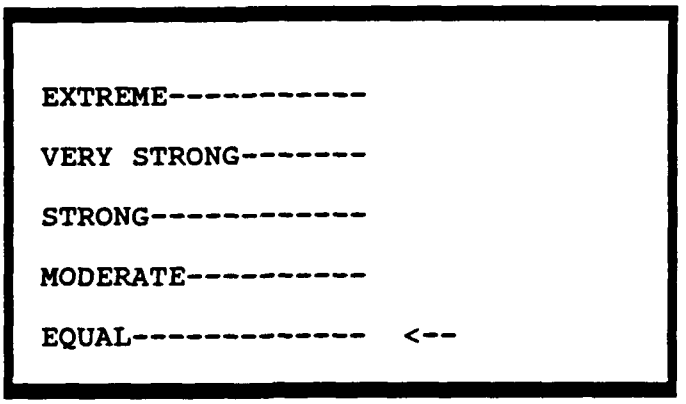
With respect to
GOAL > CPO

OPTION 2 :Dir to Div(GM) to Team(GS).
is EQUALLY as PREFERABLE as
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).



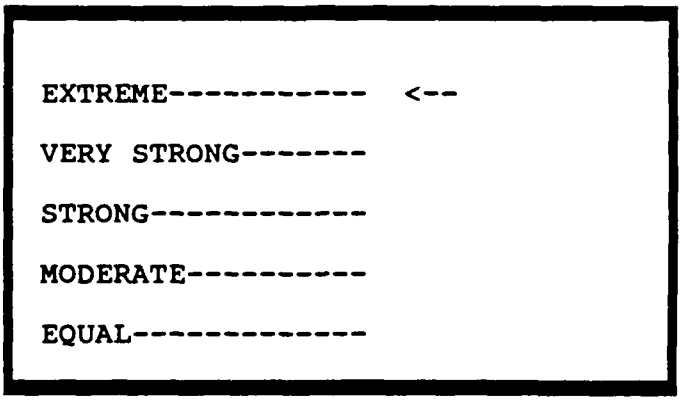
With respect to
GOAL > CPO

OPTION 2 :Dir to Div(GM) to Team(GS).
is EQUALLY as PREFERABLE as
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



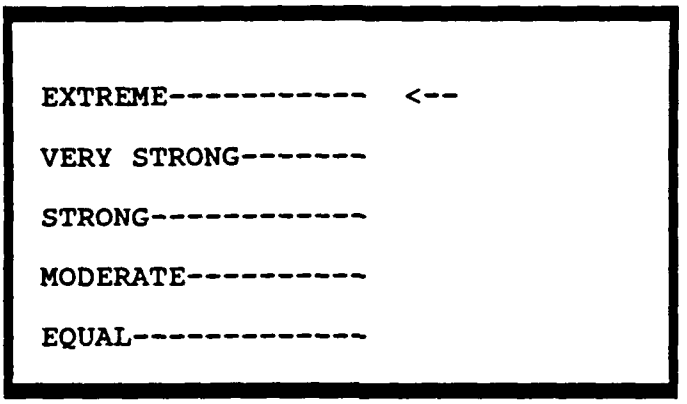
With respect to
GOAL > CPO

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is EXTREMELY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



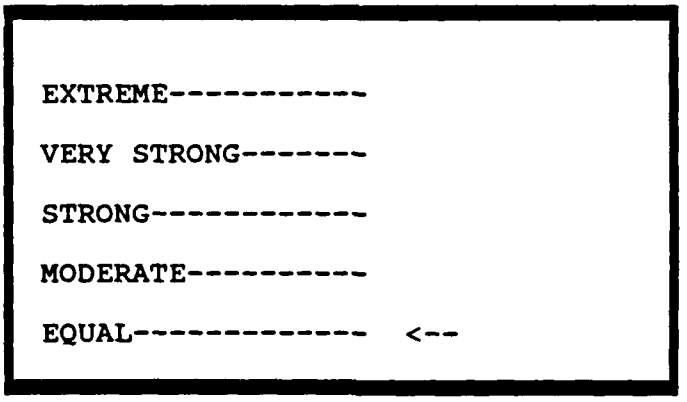
With respect to
GOAL > CPO

OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).
is EXTREMELY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



With respect to
GOAL > CPO

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is EQUALLY as PREFERABLE as
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).

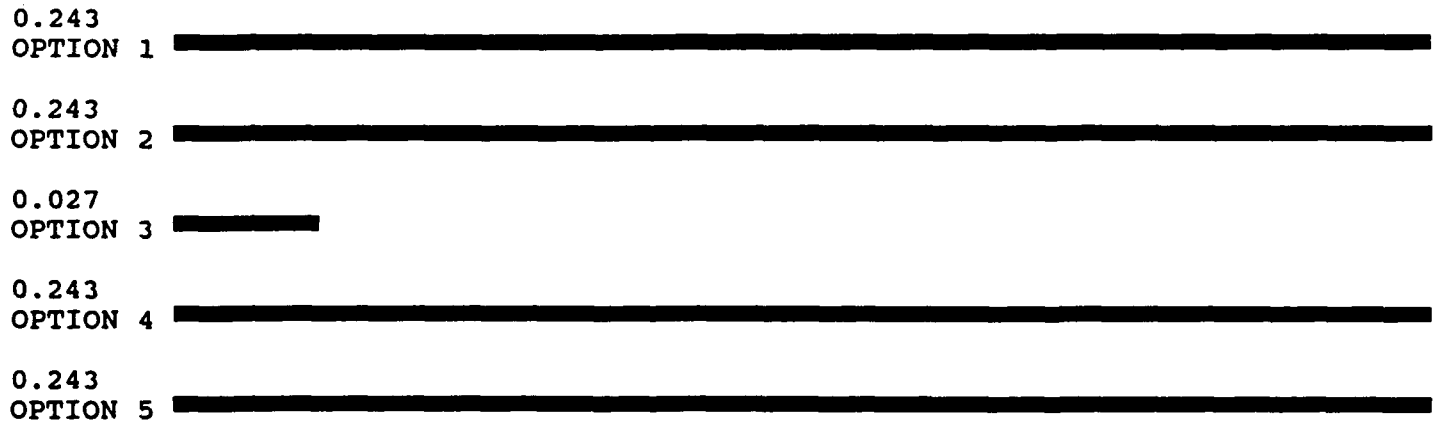


JUDGMENTS AND PRIORITIES WITH RESPECT TO
GOAL > CPO

	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
OPTION 1		1.0	9.0	1.0	1.0
OPTION 2			9.0	1.0	1.0
OPTION 3				(9.0)	(9.0)
OPTION 4					1.0
OPTION 5					

Matrix entry indicates that ROW element is ___
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY
more PREFERABLE than COLUMN element
unless enclosed in parenthesis.

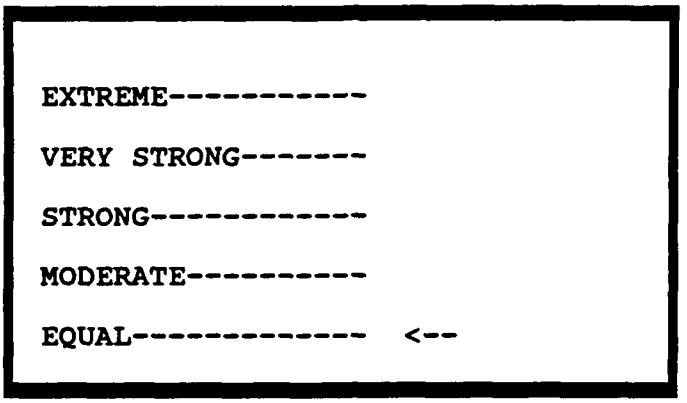
OPTION 1 :Dir to Div(GM) to Team(GM).
OPTION 2 :Dir to Div(GM) to Team(GS).
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



INCONSISTENCY RATIO = 0.000

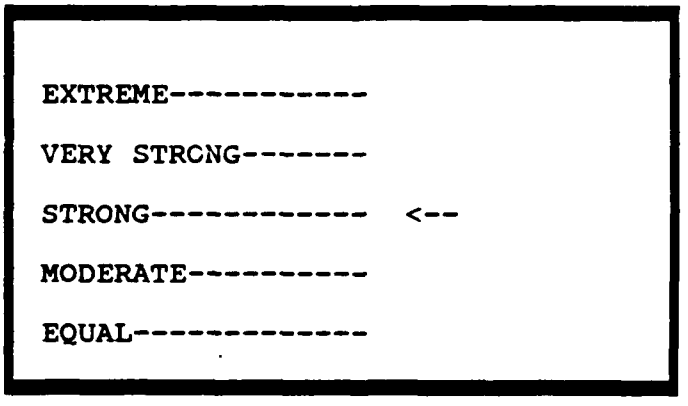
With respect to
GOAL > TECH ITG

OPTION 1 :Dir to Div(GM) to Team(GM).
is EQUALLY as PREFERABLE as
OPTION 2 :Dir to Div(GM) to Team(GS).



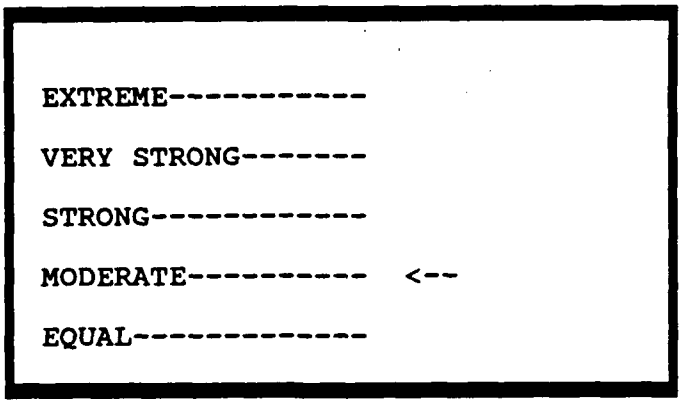
With respect to
GOAL > TECH ITG

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is STRONGLY more PREFERABLE than
OPTION 1 :Dir to Div(GM) to Team(GM).



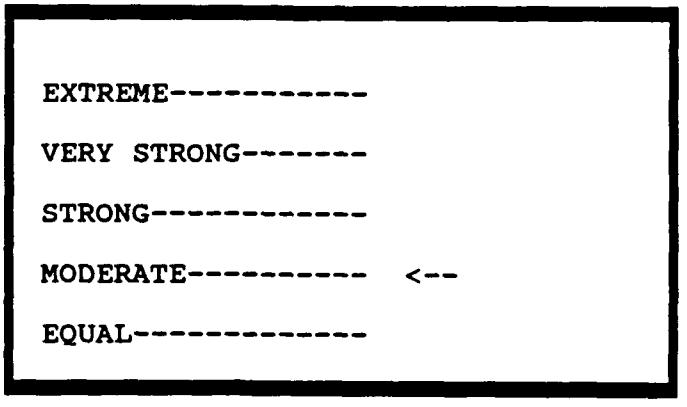
With respect to
GOAL > TECH ITG

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is MODERATELY more PREFERABLE than
OPTION 1 :Dir to Div(GM) to Team(GM).



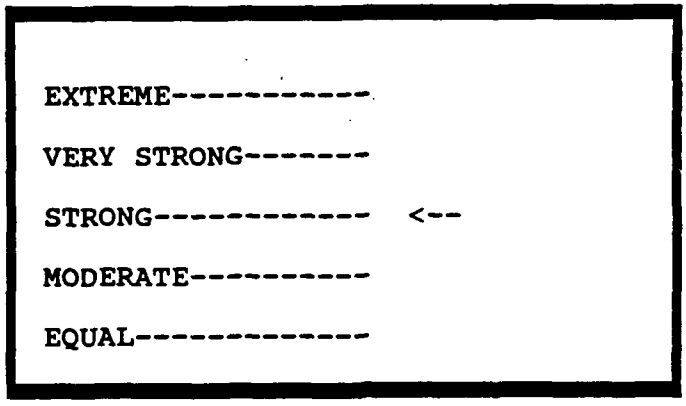
With respect to
GOAL > TECH ITG

OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).
is MODERATELY more PREFERABLE than
OPTION 1 :Dir to Div(GM) to Team(GM).



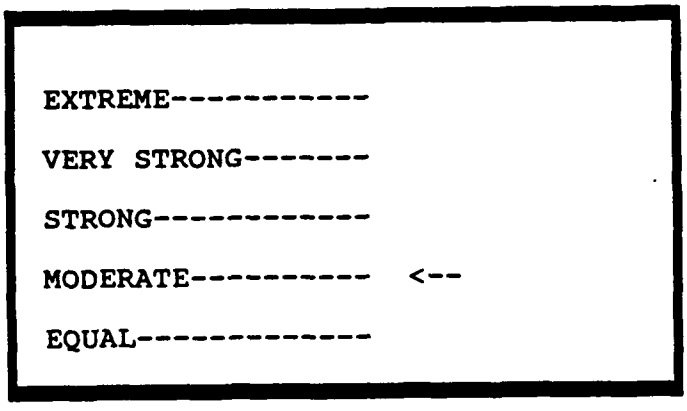
With respect to
GOAL > TECH ITG

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is STRONGLY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



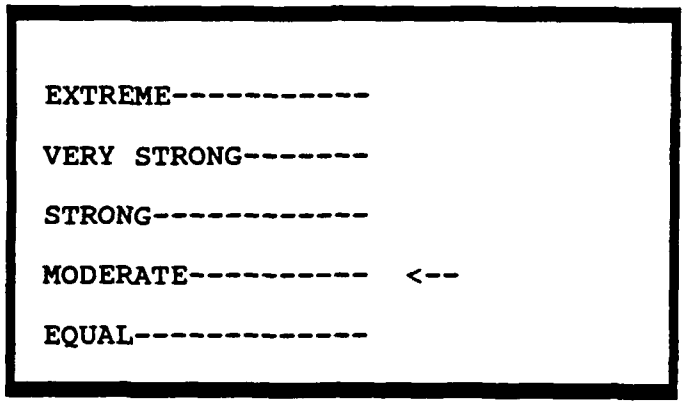
With respect to
GOAL > TECH ITG

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is MODERATELY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



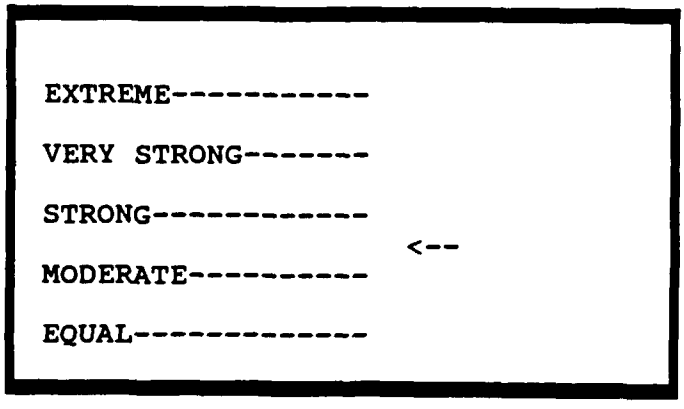
With respect to
GOAL > TECH ITG

OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).
is MODERATELY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



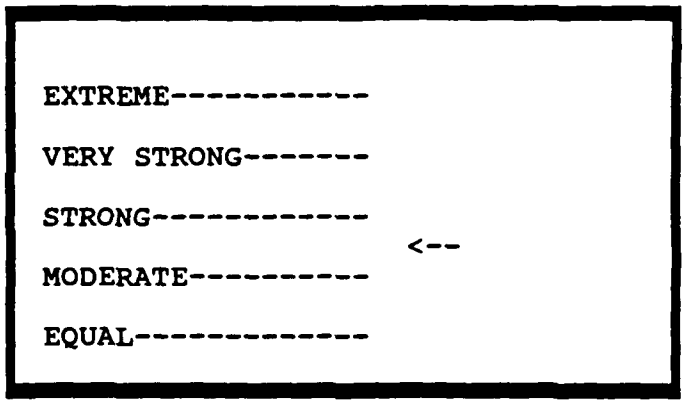
With respect to
GOAL > TECH ITG

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is MODERATE to STRONGLY more PREFERABLE than
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).



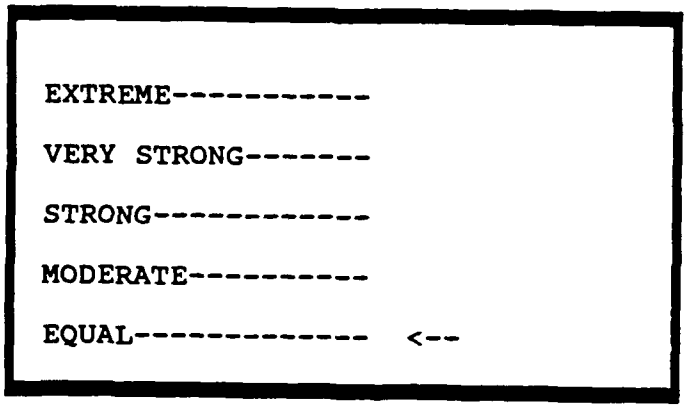
With respect to
GOAL > TECH ITG

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is MODERATE to STRONGLY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



With respect to
GOAL > TECH ITG

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is EQUALLY as PREFERABLE as
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



JUDGMENTS AND PRIORITIES WITH RESPECT TO
GOAL > TECH ITG

	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
OPTION 1		1.0	(5.0)	(3.0)	(3.0)
OPTION 2			(5.0)	(3.0)	(3.0)
OPTION 3				4.0	4.0
OPTION 4					1.0
OPTION 5					

Matrix entry indicates that ROW element is ___
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY
more PREFERABLE than COLUMN element
unless enclosed in parenthesis.

OPTION 1 :Dir to Div(GM) to Team(GM).
OPTION 2 :Dir to Div(GM) to Team(GS).
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).

0.070
OPTION 1

0.070
OPTION 2

0.510
OPTION 3

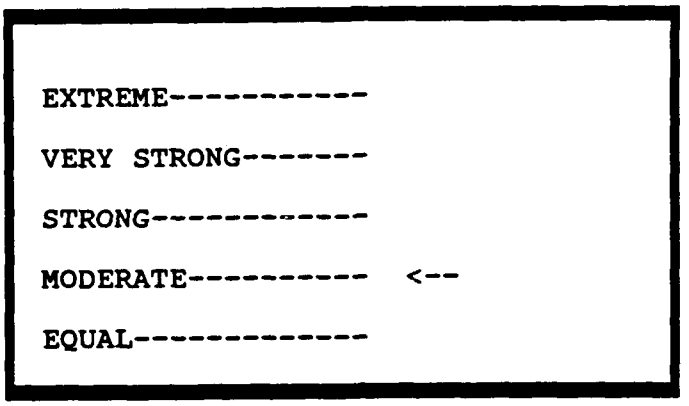
0.175
OPTION 4

0.175
OPTION 5

INCONSISTENCY RATIO = 0.028

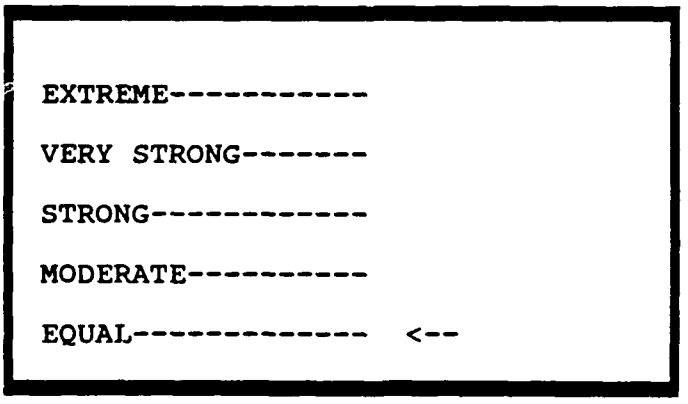
With respect to
GOAL > GRADES

OPTION 1 :Dir to Div(GM) to Team(GM).
   is MODERATELY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



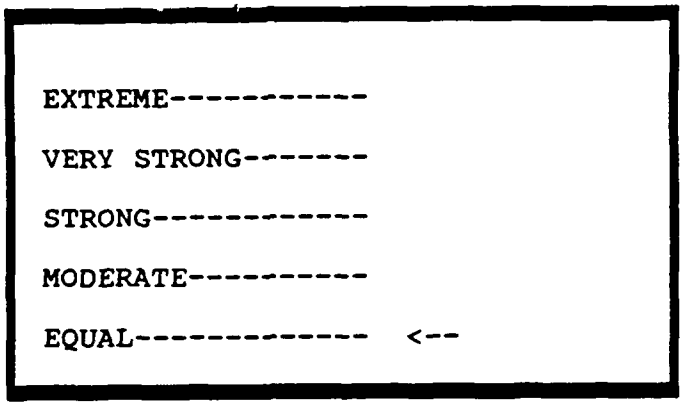
With respect to
GOAL > GRADES

OPTION 1 :Dir to Div(GM) to Team(GM).
   is EQUALLY as PREFERABLE as
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



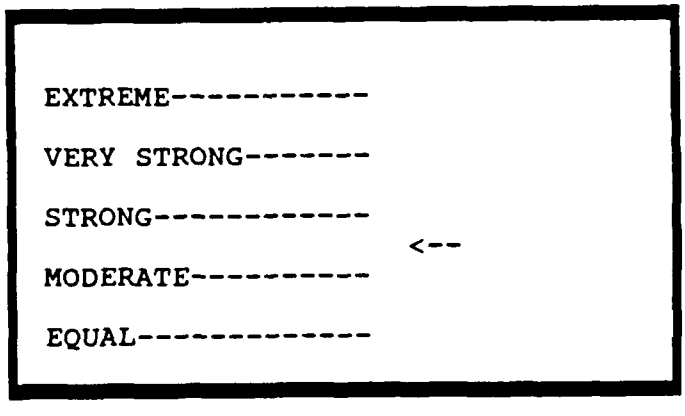
With respect to
GOAL > GRADES

OPTION 1 :Dir to Div(GM) to Team(GM).
is EQUALLY as PREFERABLE as
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).



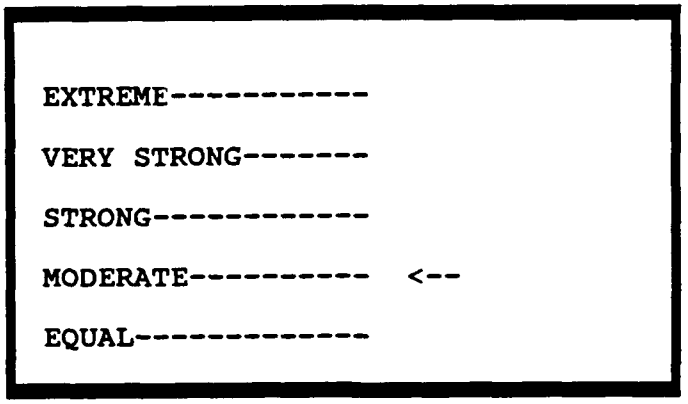
With respect to
GOAL > GRADES

OPTION 1 :Dir to Div(GM) to Team(GM).
is MODERATE to STRONGLY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



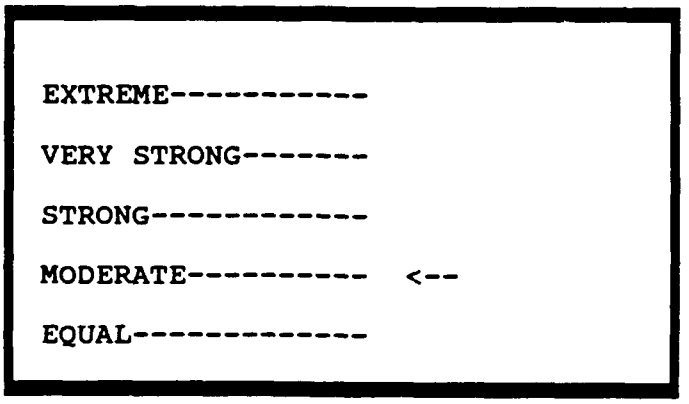
With respect to
GOAL > GRADES

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is MODERATELY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



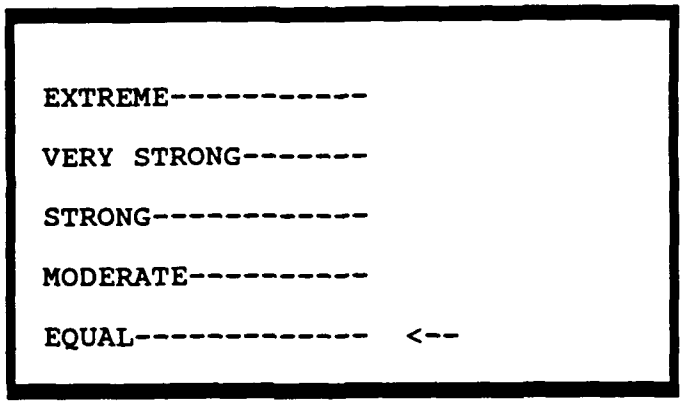
With respect to
GOAL > GRADES

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is MODERATELY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



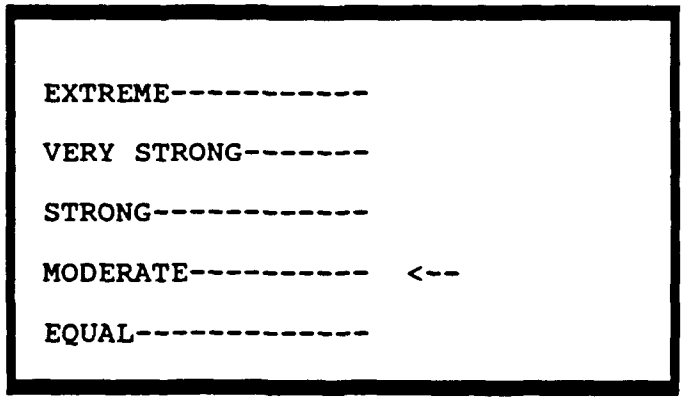
With respect to
GOAL > GRADES

OPTION 2 :Dir to Div(GM) to Team(GS).
is EQUALLY as PREFERABLE as
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



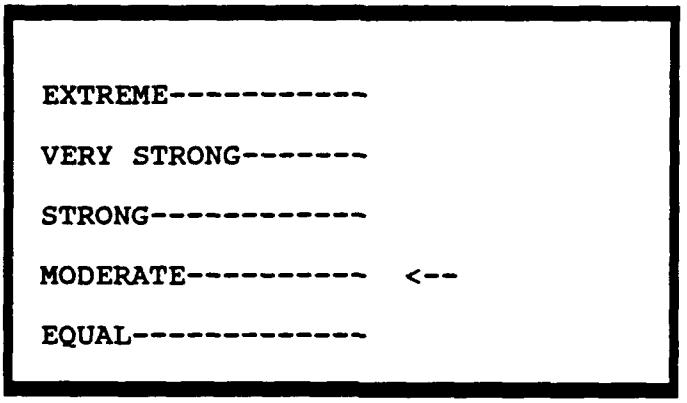
With respect to
GOAL > GRADES

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is MODERATELY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



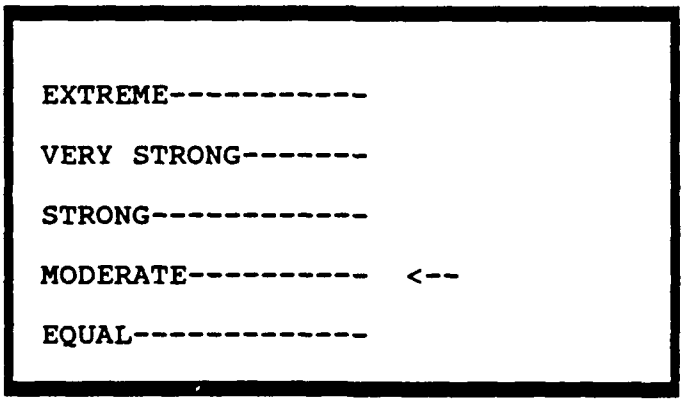
With respect to
GOAL > GRADES

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is MODERATELY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



With respect to
GOAL > GRADES

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is MODERATELY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).

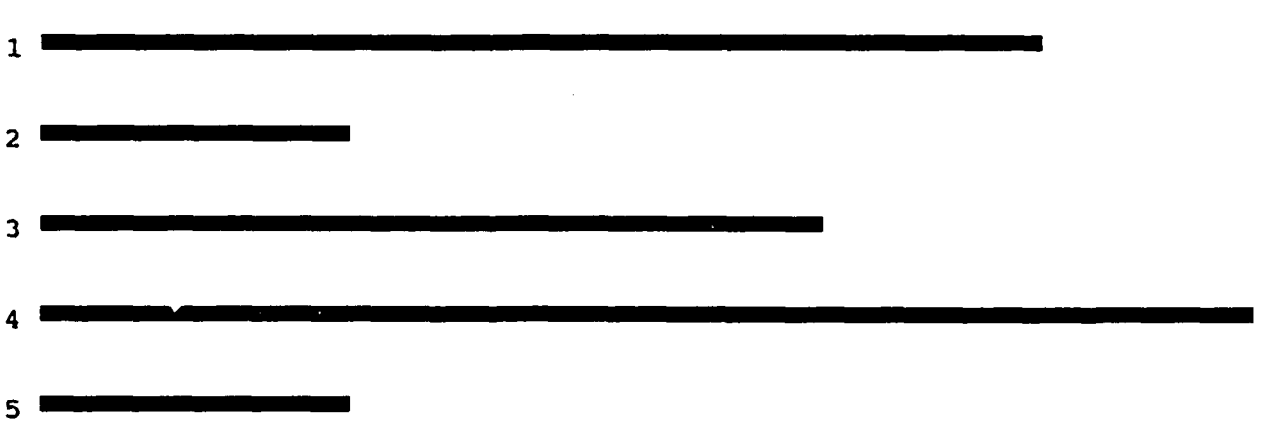


JUDGMENTS AND PRIORITIES WITH RESPECT TO
GOAL > GRADES

	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
OPTION 1		3.0	1.0	1.0	4.0
OPTION 2			(3.0)	(3.0)	1.0
OPTION 3				(3.0)	3.0
OPTION 4					3.0
OPTION 5					

Matrix entry indicates that ROW element is ___
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY more PREFERABLE than COLUMN element
unless enclosed in parenthesis.

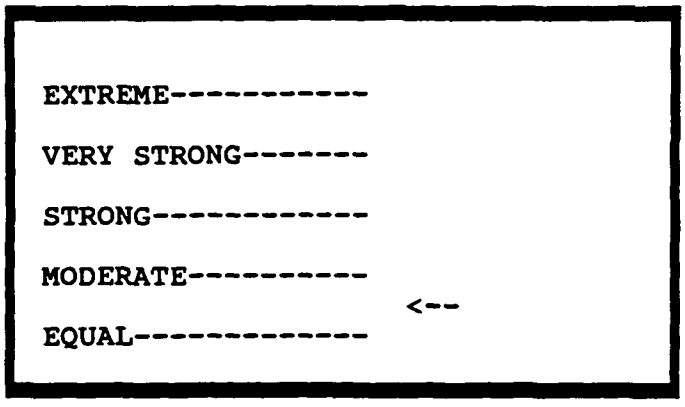
OPTION 1 :Dir to Div(GM) to Team(GM).
OPTION 2 :Dir to Div(GM) to Team(GS).
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



INCONSISTENCY RATIO = 0.036

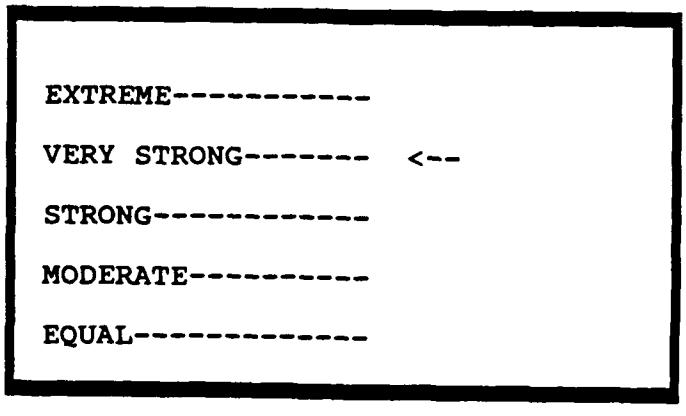
With respect to
GOAL > DUTIES

OPTION 1 :Dir to Div(GM) to Team(GM).
   is EQUAL to MODERATELY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



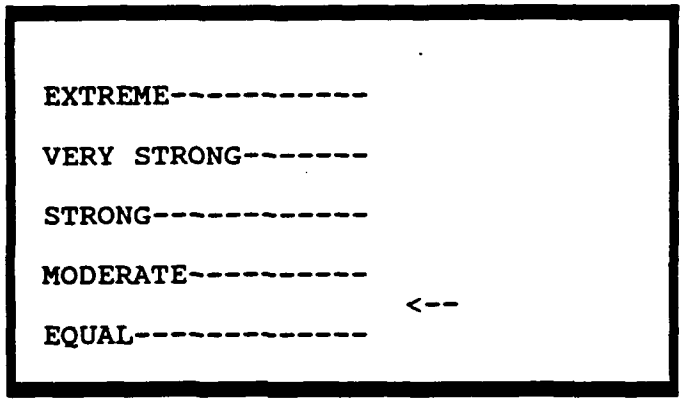
With respect to
GOAL > DUTIES

OPTION 1 :Dir to Div(GM) to Team(GM).
   is VERY STRONGLY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



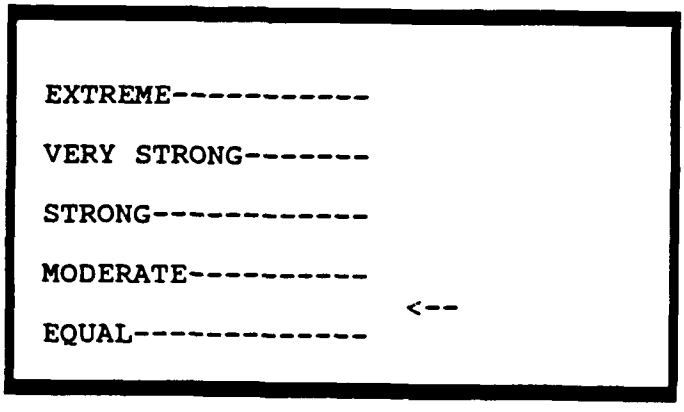
With respect to
GOAL > DUTIES

OPTION 1 :Dir to Div(GM) to Team(GM).
is EQUAL to MODERATELY more PREFERABLE than
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).



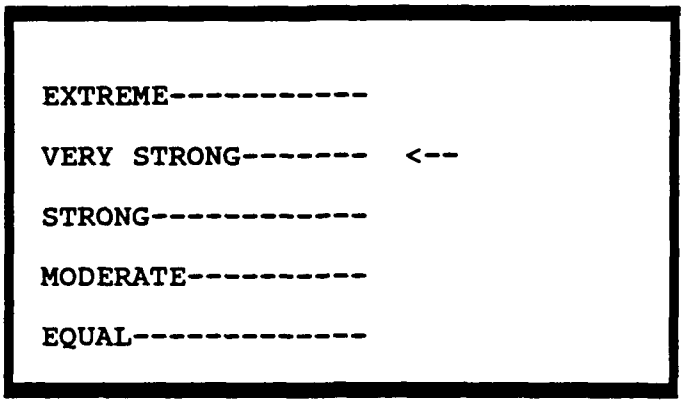
With respect to
GOAL > DUTIES

OPTION 1 :Dir to Div(GM) to Team(GM).
is EQUAL to MODERATELY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



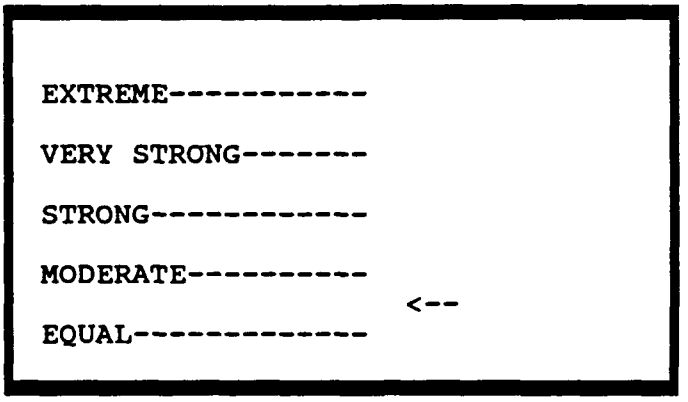
With respect to
GOAL > DUTIES

OPTION 2 :Dir to Div(GM) to Team(GS).
is VERY STRONGLY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



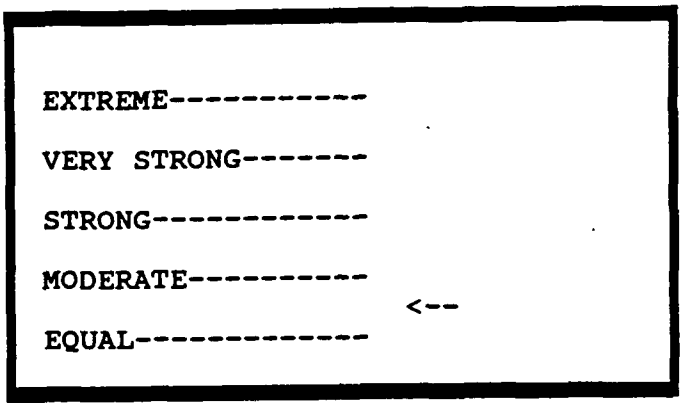
With respect to
GOAL > DUTIES

OPTION 2 :Dir to Div(GM) to Team(GS).
is EQUAL to MODERATELY more PREFERABLE than
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).



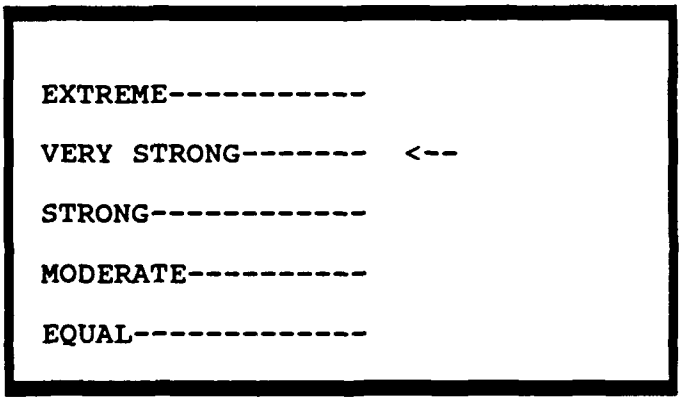
With respect to
GOAL > DUTIES

OPTION 2 :Dir to Div(GM) to Team(GS).
is EQUAL to MODERATELY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



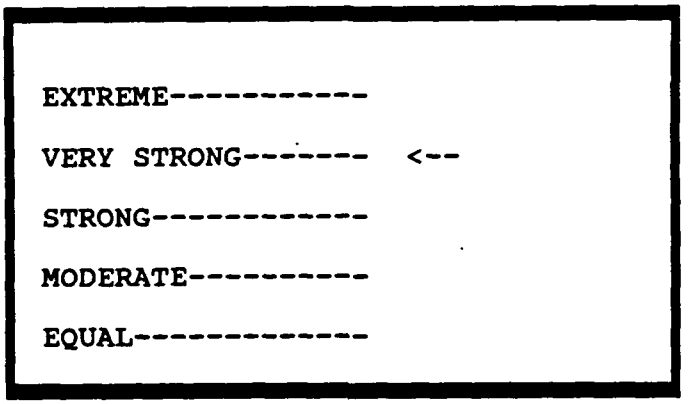
With respect to
GOAL > DUTIES

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is VERY STRONGLY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



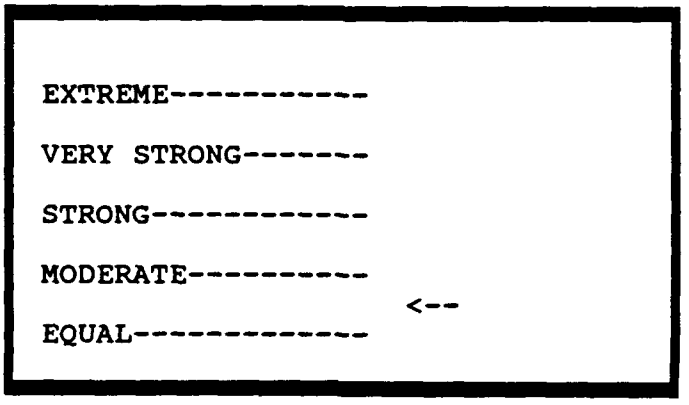
With respect to
GOAL > DUTIES

OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).
is VERY STRONGLY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



With respect to
GOAL > DUTIES

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is EQUAL to MODERATELY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



JUDGMENTS AND PRIORITIES WITH RESPECT TO
GOAL > DUTIES

	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
OPTION 1		2.0	7.0	2.0	2.0
OPTION 2			7.0	2.0	2.0
OPTION 3				(7.0)	(7.0)
OPTION 4					2.0
OPTION 5					

Matrix entry indicates that ROW element is ___
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY
more PREFERABLE than COLUMN element
unless enclosed in parenthesis.

OPTION 1 :Dir to Div(GM) to Team(GM).
OPTION 2 :Dir to Div(GM) to Team(GS).
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).

0.349
OPTION 1 

0.265
OPTION 2 

0.033
OPTION 3 

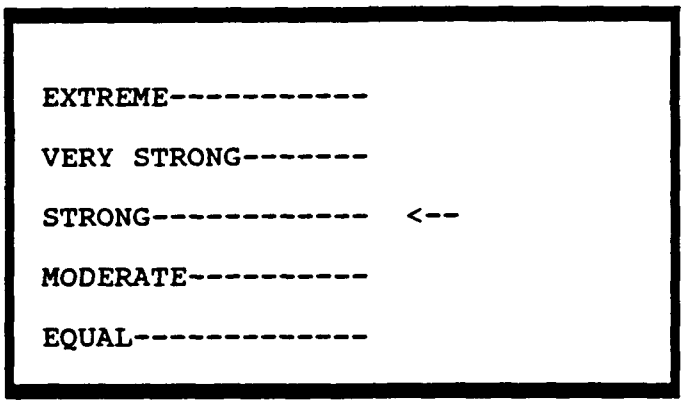
0.201
OPTION 4 

0.152
OPTION 5 

INCONSISTENCY RATIO = 0.044

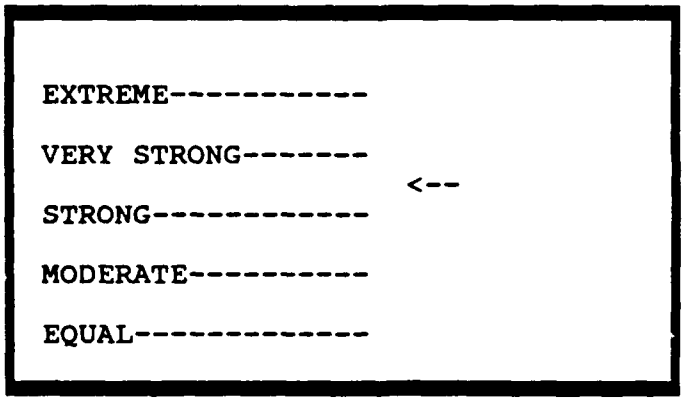
With respect to
GOAL > FLAT ORG

OPTION 2 :Dir to Div(GM) to Team(GS).
is STRONGLY more PREFERABLE than
OPTION 1 :Dir to Div(GM) to Team(GM).



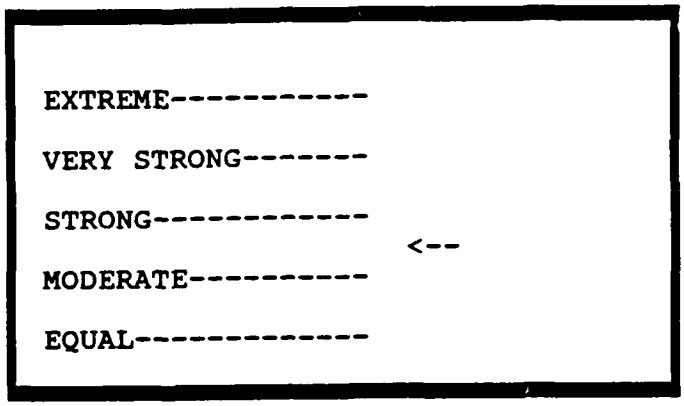
With respect to
GOAL > FLAT ORG

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is STRONG to VERY STRONGLY more PREFERABLE than
OPTION 1 :Dir to Div(GM) to Team(GM).



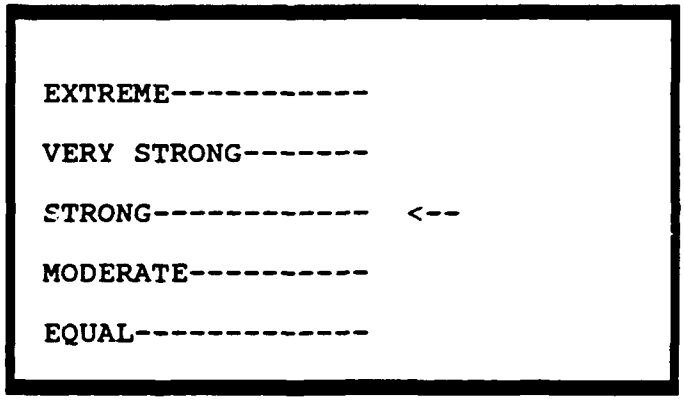
With respect to
GOAL > FLAT ORG

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is MODERATE to STRONGLY more PREFERABLE than
OPTION 1 :Dir to Div(GM) to Team(GM).



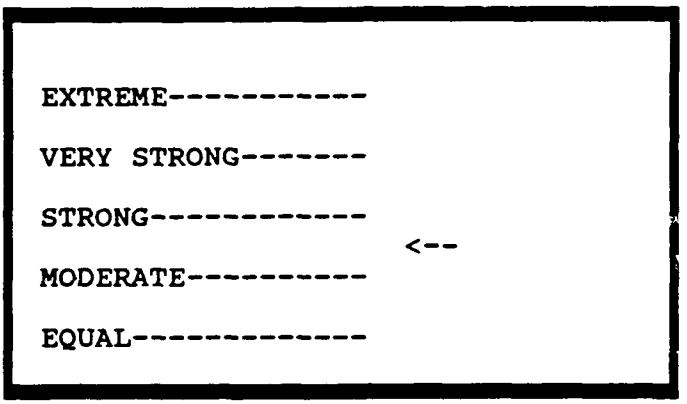
With respect to
GOAL > FLAT ORG

OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).
is STRONGLY more PREFERABLE than
OPTION 1 :Dir to Div(GM) to Team(GM).



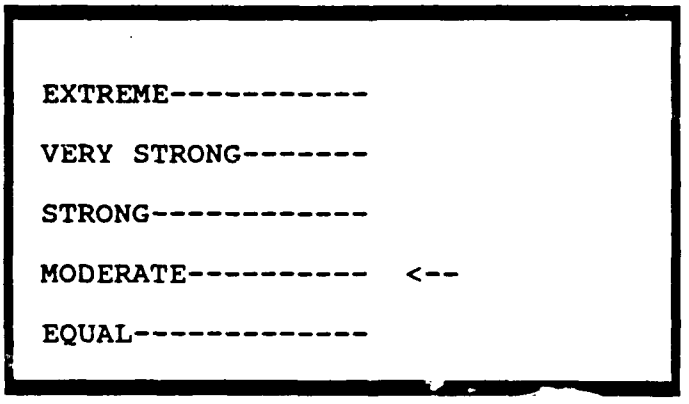
With respect to
GOAL > FLAT ORG

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is MODERATE to STRONGLY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



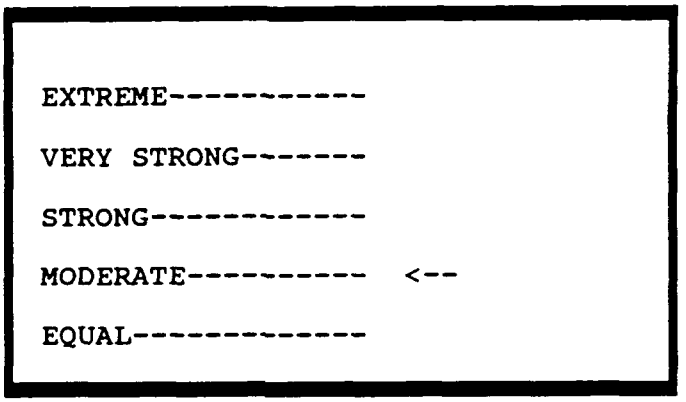
With respect to
GOAL > FLAT ORG

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
is MODERATELY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



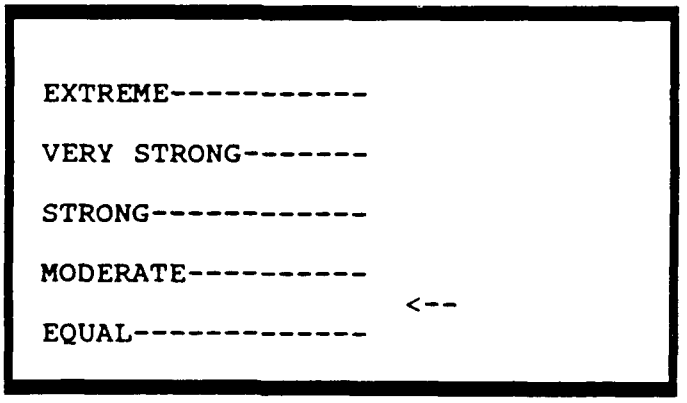
With respect to
GOAL > FLAT ORG

OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).
is MODERATELY more PREFERABLE than
OPTION 2 :Dir to Div(GM) to Team(GS).



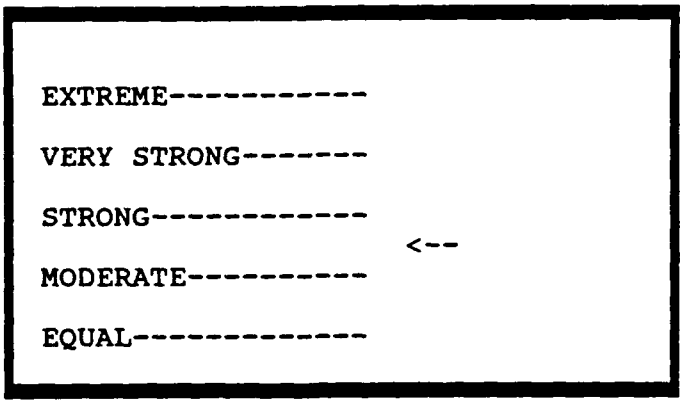
With respect to
GOAL > FLAT ORG

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is EQUAL to MODERATELY more PREFERABLE than
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).



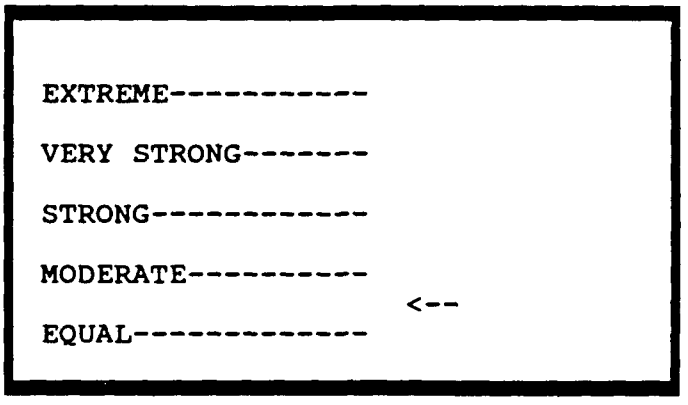
With respect to
GOAL > FLAT ORG

OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
is MODERATE to STRONGLY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



With respect to
GOAL > FLAT ORG

OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).
is EQUAL to MODERATELY more PREFERABLE than
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).



JUDGMENTS AND PRIORITIES WITH RESPECT TO
GOAL > FLAT ORG

	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
OPTION 1		(5.0)	(6.0)	(4.0)	(5.0)
OPTION 2			(4.0)	(3.0)	(3.0)
OPTION 3				2.0	4.0
OPTION 4					(2.0)
OPTION 5					

Matrix entry indicates that ROW element is ___
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY
more PREFERABLE than COLUMN element
unless enclosed in parenthesis.

OPTION 1 :Dir to Div(GM) to Team(GM).
OPTION 2 :Dir to Div(GM) to Team(GS).
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).

0.042
OPTION 1

0.104
OPTION 2

0.442
OPTION 3

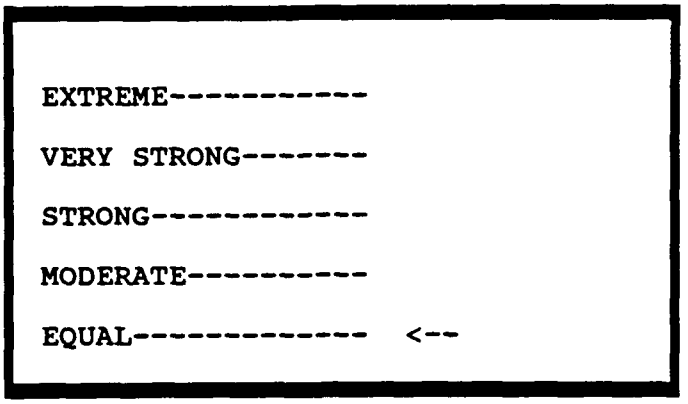
0.185
OPTION 4

0.227
OPTION 5

INCONSISTENCY RATIO = 0.093

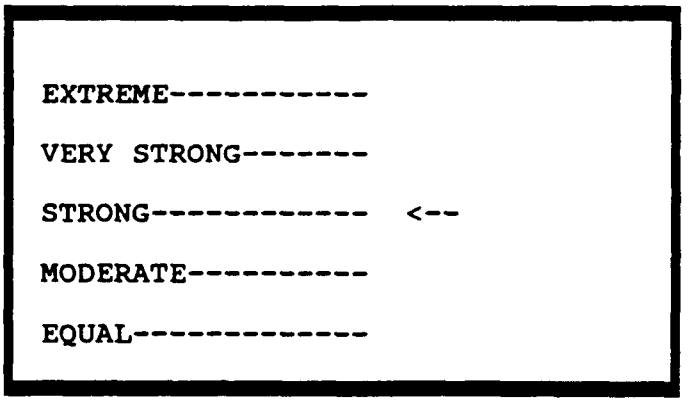
With respect to
GOAL > FAST IMP

OPTION 1 :Dir to Div(GM) to Team(GM).
is EQUALLY as PREFERABLE as
OPTION 2 :Dir to Div(GM) to Team(GS).



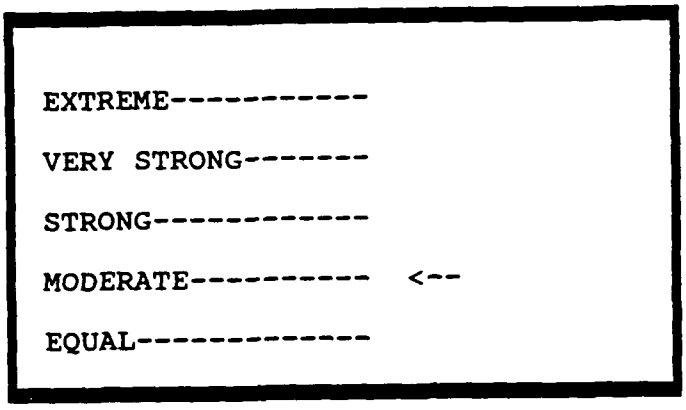
With respect to
GOAL > FAST IMP

OPTION 1 :Dir to Div(GM) to Team(GM).
is STRONGLY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



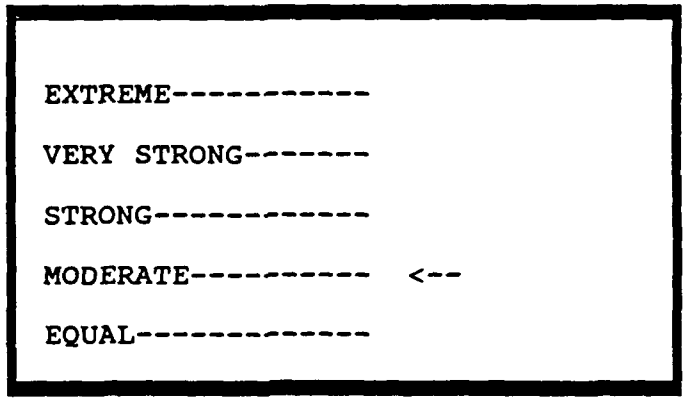
With respect to
GOAL > FAST IMP

OPTION 1 :Dir to Div(GM) to Team(GM).
is MODERATELY more PREFERABLE than
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).



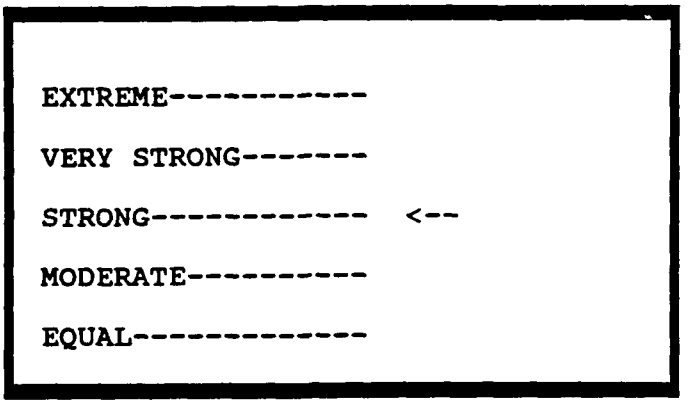
With respect to
GOAL > FAST IMP

OPTION 1 :Dir to Div(GM) to Team(GM).
is MODERATELY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



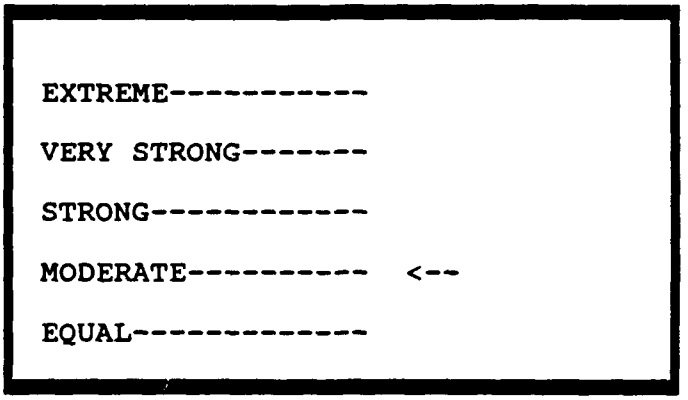
With respect to
GOAL > FAST IMP

OPTION 2 :Dir to Div(GM) to Team(GS).
is STRONGLY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



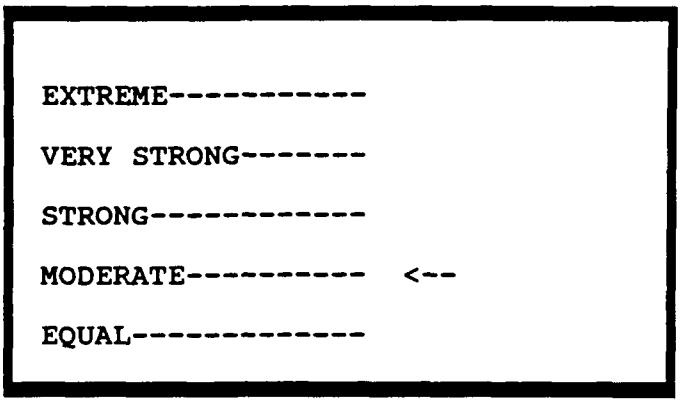
With respect to
GOAL > FAST IMP

OPTION 2 :Dir to Div(GM) to Team(GS).
is MODERATELY more PREFERABLE than
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Tea



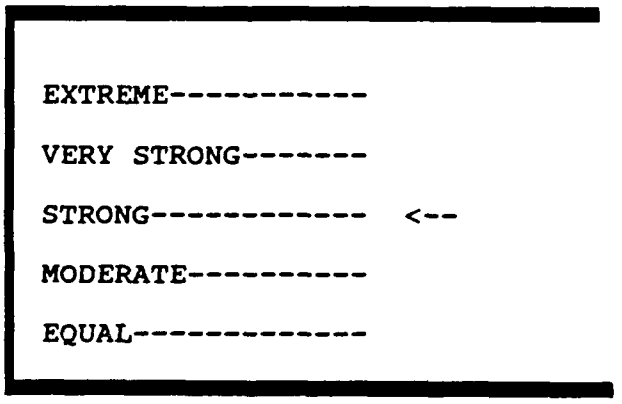
With respect to
GOAL > FAST IMP

OPTION 2 :Dir to Div(GM) to Team(GS).
is MODERATELY more PREFERABLE than
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).



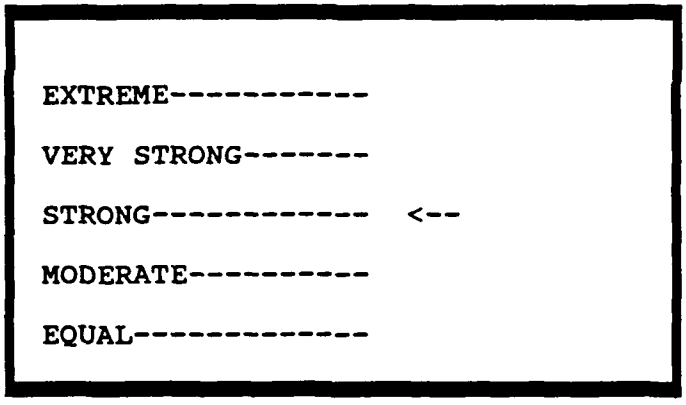
With respect to
GOAL > FAST IMP

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Prodı
is STRONGLY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



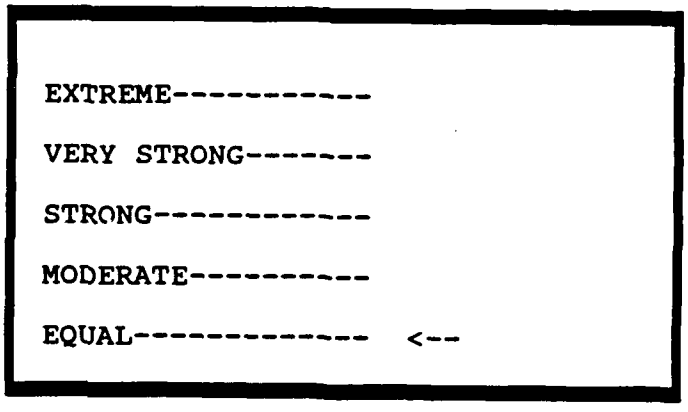
With respect to
GOAL > FAST IMP

OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).
is STRONGLY more PREFERABLE than
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).



With respect to
GOAL > FAST IMP

OPTION 4 :Dir to Div(GM) to Functional Br(GM), Produ
is EQUALLY as PREFERABLE as
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Produ



JUDGMENTS AND PRIORITIES WITH RESPECT TO
GOAL > FAST IMP

	OPTION 1	OPTION 2	OPTION 3	OPTION 4	OPTION 5
OPTION 1		1.0	5.0	3.0	3.0
OPTION 2			5.0	3.0	3.0
OPTION 3				(5.0)	(5.0)
OPTION 4					1.0
OPTION 5					

Matrix entry indicates that ROW element is ___
1 EQUALLY 3 MODERATELY 5 STRONGLY 7 VERY STRONGLY 9 EXTREMELY
more PREFERABLE than COLUMN element
unless enclosed in parenthesis.

OPTION 1 :Dir to Div(GM) to Team(GM).
OPTION 2 :Dir to Div(GM) to Team(GS).
OPTION 3 :Dir to Dept(GM), Ofc(GM), Team(GM/GS).
OPTION 4 :Dir to Div(GM) to Functional Br(GM), Product Team(GM).
OPTION 5 :Dir to Div(GM) to Functional Team(GS), Product Team(GS).

0.336
OPTION 1 

0.336
OPTION 2 

0.045
OPTION 3 

0.141
OPTION 4 

0.141
OPTION 5 

INCONSISTENCY RATIO = 0.044